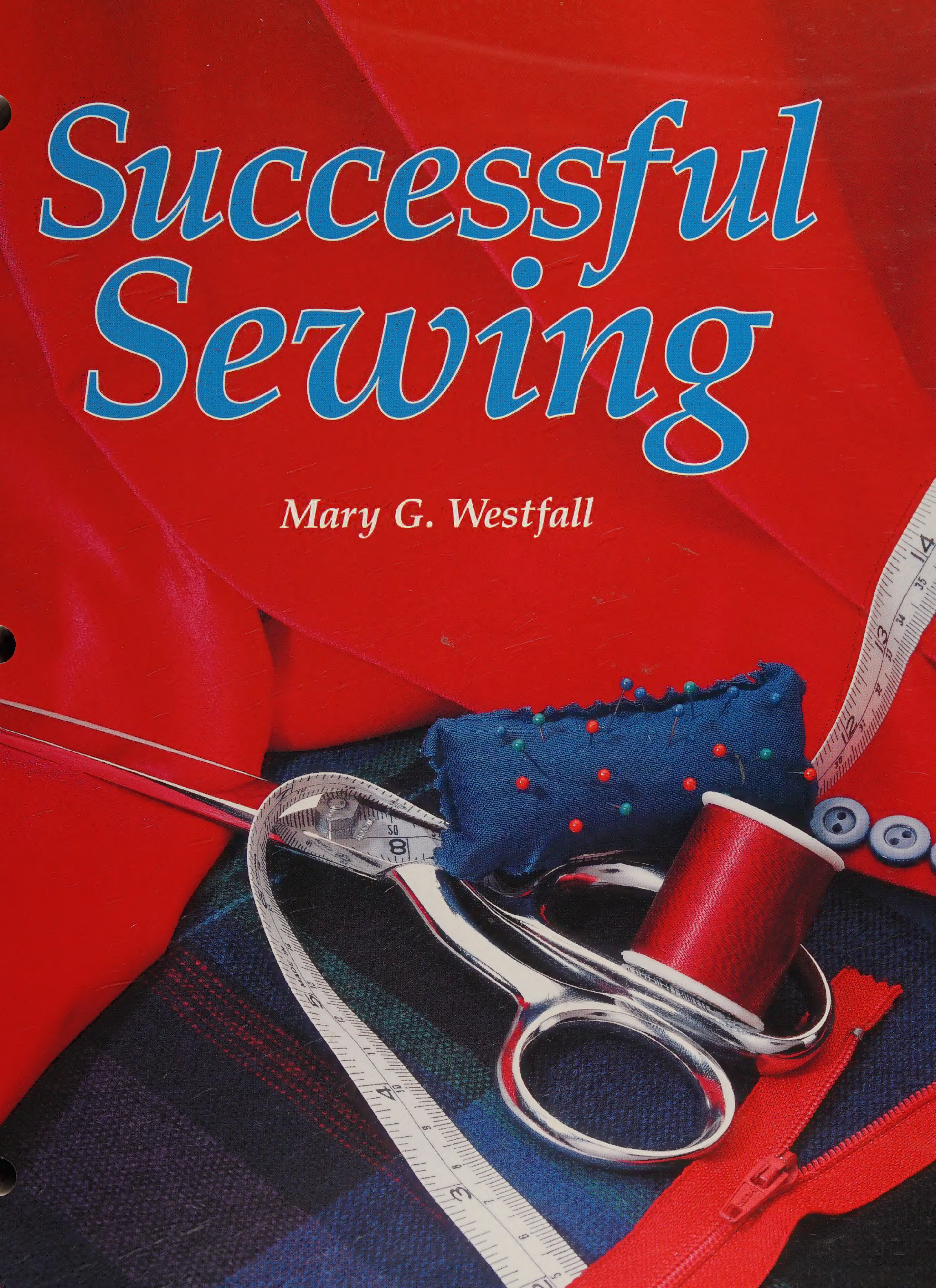
Successful Sewing

Mary G. Westfall



Successful Sewing

Mary G. Westfall, CFCS
Author of Family and Consumer Sciences
Instructional Materials
Selah, Washington

Publisher
The Goodheart-Willcox Company, Inc.
Tinley Park, Illinois

The idea, the opportunity,
and the ability to do this work
came from Another—

and with deep appreciation
to my husband for his help.

Copyright 2002
by
The Goodheart-Willcox Company, Inc.
Previous Editions Copyright 1998, 1994, 1990, 1987

Previous Copyright 1983 (under the title of *A Sequenced Modular Method for Teaching Clothing Construction* by Mary Glenda Cameron Westfall)

All rights reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of The Goodheart-Willcox Company, Inc. Manufactured in the United States of America.

Library of Congress Catalog Card Number 2001040874
International Standard Book Number 1-56637-860-5

2 3 4 5 6 7 8 9 10 02 06 05 04 03

Library of Congress Cataloging-in-Publication Data
Westfall, Mary G. (Mary Glenda)
Successful sewing / Mary G. Westfall.
p. cm.
Includes index.
ISBN 1-56637-860-5
1. Sewing I. Title
TT705.W47 2002
646.2--dc21 2001040874
CIP

Introduction

If you have just made the decision to learn to sew, you will need help in gaining an understanding of basic sewing skills. This textbook will provide all of the information and activities you will need to achieve your goal. If you are an experienced sewer, this book will help you brush up on your present skills. It will also challenge you to try new techniques.

The following is a brief summary of the units included in this textbook. It will give you an idea of what to expect as you work through the materials.

Unit 1: An Introductory Activity

The text book begins with an introductory lesson that will acquaint you with what is ahead. You will find out what is to be learned and discover just how much you may already know.

Unit 2: Evaluating Your Knowledge and Planning Your Learning

In this section you will need to take a pretest. Don't worry! You aren't expected to know all the answers. The test is to help you plan your learning. Other activities are also included to help you develop your own plan for learning to sew.

Unit 3: Learning the Basics

Unit 3 contains lessons providing all the basic information needed to learn to sew. If you have sewn before, you may not need to complete all of the lessons. Your pretest, your teacher, and your personal goals will help you decide which lessons you need to complete.

The information in the basic lessons is presented in a way that may be completed through self study. It may also be completed by working with other members of your class. Sometimes your teacher may ask you to work by yourself. At other times, he or she may ask you to work with your classmates. This arrangement will help you meet your personal learning needs quickly and easily.

The lessons have been designed around three types of learning processes: gathering information, practicing, and evaluating learning. You will find learning easier if you do all the activities in the order they are given. This method of study will also help you retain information longer.

Unit 4: Assessing Your Learning

This unit includes a posttest similar to the pretest you took in Unit 2. Taking the test will help you see how much you have learned. It will also help you identify any skills that you need to practice. Analyzing the results of the posttest will allow you to review needed skills before beginning work on your project.

Unit 5: Project Selection and Planning

In this unit, you will find activities designed to assist you in selecting and planning your sewing project. You will also find a list of steps to help you begin your project.

Unit 6: Constructing the Project

This section includes additional lessons that will give you helpful suggestions for constructing each detail of your sewing project. For instance, suggestions for constructing a pocket or sleeve can be found here. The purpose of these lessons is to help you avoid common problems and mistakes. You will work through only those lessons needed to complete your sewing project. When working with these lessons, you will still use the instruction sheet that comes with your pattern.

Also included in Unit 6 are evaluation forms to be completed as you finish each detail of your sewing project. These evaluations will help you complete your project successfully.

Unit 7: Learning to Sew with Sergers

This unit will open up exciting new avenues of sewing possibilities. You will discover how to operate sergers. You will learn how to construct garments using techniques very different from those used with conventional sewing machines.

To complete this unit, your teacher may help you work through the materials. If you have a serger at home, you may want to study the information and complete the activities on your own.

Unit 8: Evaluating the Project

In this unit, you will find several forms. They will help you evaluate your completed conventional and serged sewing projects. They will also help you take stock of the total learning you have achieved in this class.

Unit 9: Additional Experience

In the last unit of this textbook, you will find ideas for expanding your sewing knowledge and skill. Your teacher may assign an in-class project that includes some techniques suggested in this section. You may also be encouraged to explore some of these ideas on your own. You may be allowed to complete some projects incorporating techniques from this unit for extra credit. Other projects, you may choose to do just for fun.

Contents

Unit 1 An Introductory Activity 7

Unit 2 Evaluating Your Knowledge and Planning Your Learning 11

Unit 3 Learning the Basics 27

- Lesson 1 Taking Body Measurements and Selecting Your Pattern Size 31
- Lesson 2 The Pattern Envelope 37
- Lesson 3 Making Fabric Choices 49
- Lesson 4 Fabric Preparation 63
- Lesson 5 Reading the Instruction Sheet 75
- Lesson 6 Pattern Symbols 81
- Lesson 7 Pattern Adjustments 87
- Lesson 8 Pattern Layout, Pinning, and Cutting 101
- Lesson 9 Transferring Pattern Symbols to the Fabric 119
- Lesson 10 Small Equipment and Notions 129
- Lesson 11 Operating the Sewing Machine 141
- Lesson 12 Pressing As You Sew 163
- Lesson 13 Staystitching 173
- Lesson 14 Seams 179
- Lesson 15 Clipping, Notching, Trimming, and Grading 189
- Lesson 16 Seam Finishes 195
- Lesson 17 Clean Finishing 201
- Lesson 18 Understitching 207
- Lesson 19 Easing and Gathering 213
- Lesson 20 Interfacing 221
- Lesson 21 Topstitching 231
- Lesson 22 Hand Stitching 239
- Lesson 23 Hemming Methods 245

Unit 4 Assessing Your Learning 253

Unit 5 Project Selection and Planning 269

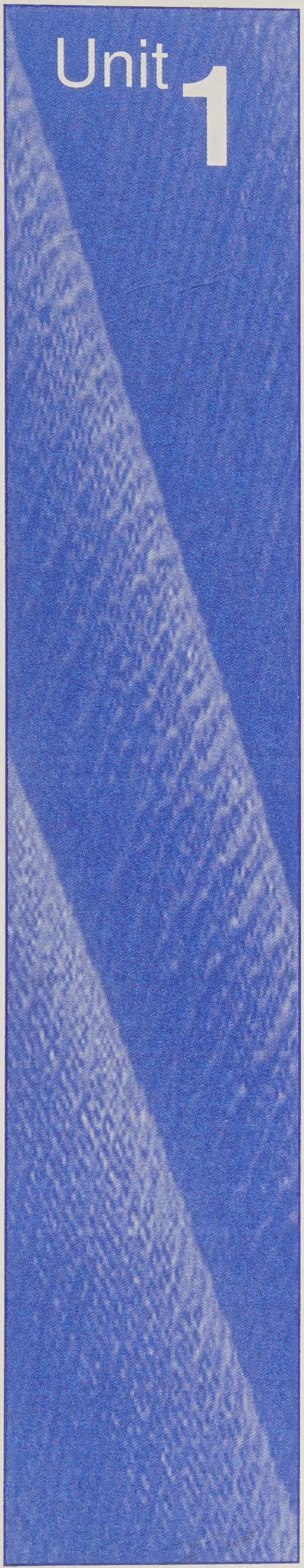
Unit 6 Constructing the Project . . . 281
Lesson 24 Constructing Darts, Tucks, and Pleats . . . 283
Lesson 25 Constructing Seams . . . 287
Lesson 26 Constructing Pockets . . . 293
Lesson 27 Constructing Ties . . . 299
Lesson 28 Constructing Waistline Seams and Stays . . . 303
Lesson 29 Inserting Zippers . . . 305
Lesson 30 Constructing Placket Openings . . . 313
Lesson 31 Constructing Facings . . . 317
Lesson 32 Constructing Yokes . . . 321
Lesson 33 Constructing Collars . . . 323
Lesson 34 Constructing Lapels . . . 329
Lesson 35 Constructing Sleeves . . . 333
Lesson 36 Constructing Sleeve Openings . . . 337
Lesson 37 Constructing Cuffs . . . 341
Lesson 38 Constructing Shoulder Pads . . . 345
Lesson 39 Constructing Waistbands . . . 349
Lesson 40 Constructing Elastic Casings . . . 353
Lesson 41 Constructing Linings . . . 357
Lesson 42 Constructing Hems . . . 361
Lesson 43 Attaching Fasteners . . . 365

Unit 7 Learning to Sew with Sergers . . . 369
Lesson 44 Operating the Serger Machine . . . 371
Lesson 45 Serger Construction Techniques . . . 391
Lesson 46 Constructing a Serged Project . . . 407

Unit 8 Evaluating the Project . . . 415

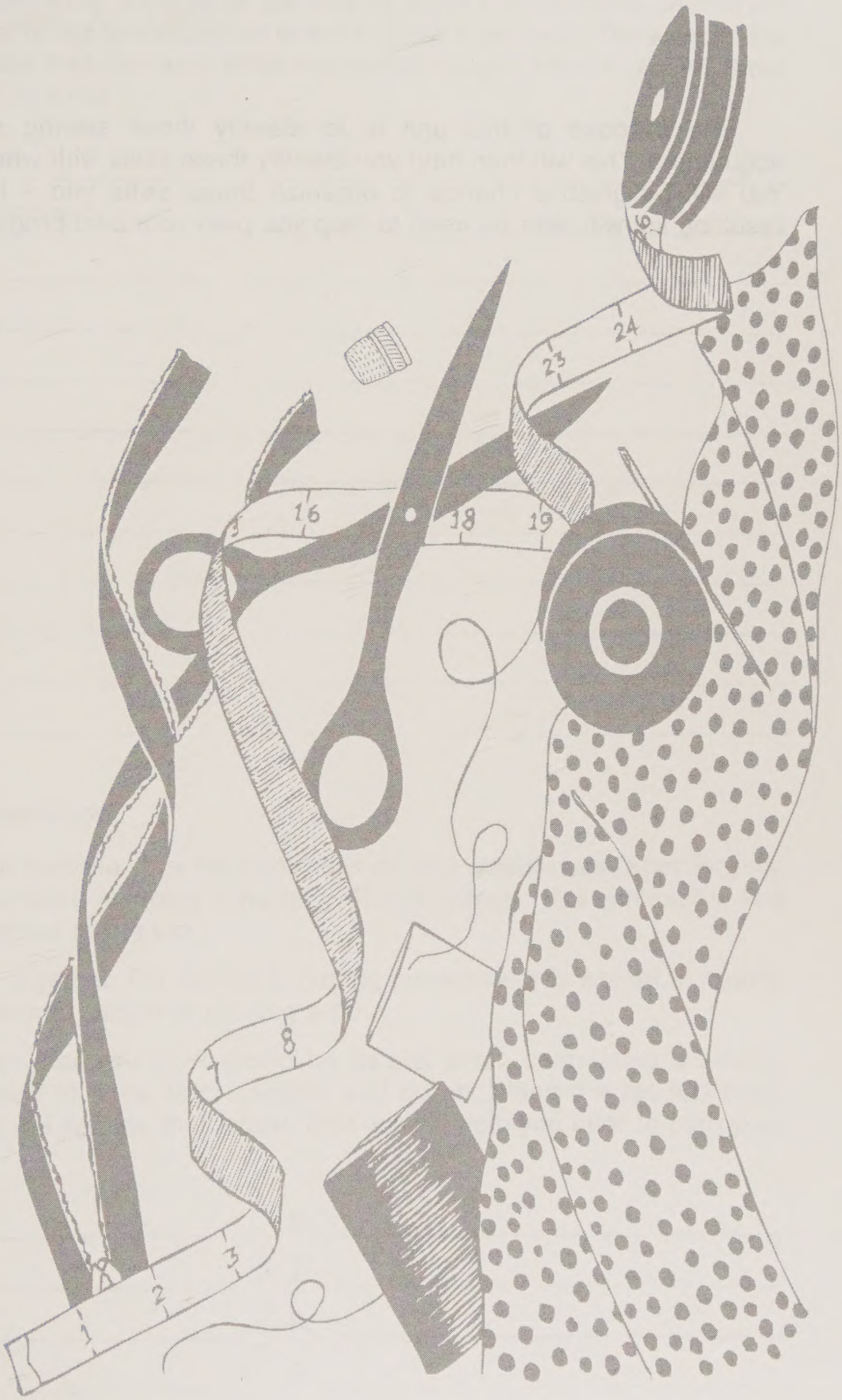
Unit 9 Additional Experiences . . . 423
Lesson 47 Applying Surface Designs . . . 429

Glossary . . . 435
Index . . . 443



Unit 1

An Introductory Activity



9
24
23
16
18
19
8
7
3
2
1

Unit 1

An Introductory Activity

The purpose of this unit is to identify those sewing skills with which you are acquainted. This will then help you identify those skills with which you are not acquainted. You will be given a chance to organize these skills into a logical learning order. The resulting list will later be used to help you plan your own program of learning.

Name ______________________

Date ______________ Period __________

An Introductory Activity

Step 1: Listing What You Know

In the spaces that follow, write a list of all the sewing skills and concepts with which you are familiar. One way of doing this would be to think about a garment. Think about the steps you might take to make that garment. What information do you need to know? Write down the points that come to mind.

Cutting out pattern pieces

Learning fabric care requirements

Step 2: Compiling Information

Work in small groups to compile your list with those of your classmates. After forming a single list, look it over and see if anything is missing. Thumb through this textbook to find more ideas. Add any new ideas to the list.

Group all similar ideas together. For instance, cutting out a sleeve is similar to cutting out a collar. Measuring a hem is similar to pinning a hem.

Place items in an order that you think would be helpful when completing a sewing project. What might you need to know first, second, and so on. When the list has been completed, write it down in the spaces that follow. This list will help you later to plan your own program of learning.

1. ______________________
2. ______________________
3. ______________________
4. ______________________
5. ______________________
6. ______________________
7. ______________________
8. ______________________
9. ______________________
10. ______________________

(Continued)

Name ______________________________

11. ______________________
12. ______________________
13. ______________________
14. ______________________
15. ______________________
16. ______________________
17. ______________________
18. ______________________
19. ______________________
20. ______________________
21. ______________________
22. ______________________
23. ______________________
24. ______________________
25. ______________________
26. ______________________
27. ______________________
28. ______________________
29. ______________________
30. ______________________
31. ______________________
32. ______________________
33. ______________________
34. ______________________
35. ______________________
36. ______________________
37. ______________________
38. ______________________
39. ______________________
40. ______________________
41. ______________________
42. ______________________
43. ______________________
44. ______________________

Step 3: Forming a Conclusion

Answer the following question in the space below: What problems might occur in constructing your sewing project if you do not have all the skills on your list?

Unit 2

Evaluating Your Knowledge and Planning Your Learning

16
18
19
23
24

Unit 2 Evaluating Your Knowledge and Planning Your Learning

This unit is designed to help you discover how much sewing knowledge you already have. You will then use this information to plan your classroom learning. This unit consists of three parts.

Basic Sewing Skills Pretest

Unit 3 in this textbook deals with basic sewing skills. Skills, such as marking pattern symbols, preparing fabric, and laying out pattern pieces, are organized into individual lessons. If you already have the skills needed for a specific lesson, you may not need to complete it. This pretest will help you determine which of the lessons you will need to complete.

Student Program Plan Sheet

This part of the unit consists of a form to be completed after your pretest has been corrected. The form will indicate sewing skills with which you are already familiar. It will also indicate skills that you need to study. The information summarized on this form will be used to help you plan your program of learning.

Weekly Plan Sheet

This form is a schedule for your classroom learning. Your teacher can help you plan when different topics are to be covered. This will allow you to prepare for lessons and make you aware of when assignments are due.

This form is also a record of your progress. It can help you keep track of when you complete various activities. It can show you how to catch up when you return from an absence, too.

Name ______________________________

Pretest Score __________ Date ________________ Period __________

Basic Sewing Skills Pretest

This pretest will help you identify the areas of clothing construction in which you have adequate knowledge and skill. It will also help you identify those areas in which you need more work. You will be planning your direction of study based on the results of this pretest.

Read each question carefully. Select the best answer and write the letter in the blank. When you have finished, your teacher will give you directions regarding how the test is to be corrected.

Remember, this is a pretest. You are not expected to know all the answers. Do the best you can.

_____ 1. When taking a back waist length measurement, the tape measure should be placed _____.
A. from the top of the shoulder to the waist
B. from the waist to the desired finished garment length
C. from the prominent bone at the back of the neck to the waist

_____ 2. When taking a man's sleeve length measurement, the measuring tape is placed from the _____.
A. elbow to the wrist
B. top of the spine to the wrist
C. shoulder bone to the wrist

_____ 3. You are making a shirt for a friend with the following measurements: bust 32, waist 26 ½, hips 36. Which pattern size would you select? (Refer to the chart below.)
A. Size 10.
B. Size 12.
C. Size 14.

Size	10	12	14	16
Bust	32½	34	36	38
Waist	25	26½	28	30
Hips	34½	36	38	40

(Continued)

Name ________________________________

_____ 4. How much fabric would be required for View A in a size 12 if the fabric were 44/45" wide? (Refer to the chart below.)
A. 1 ⅞ yards.
B. 3 ⅛ yards.
C. 3 ¼ yards.

VIEW A	8	10	12	14
44/45" fabric	3	3⅛	3⅛	3¼
58/60" fabric	1½	1⅞	1⅞	2
VIEW B				
44/45" fabric	3¼	3¼	3¼	3½
58/60" fabric	2	2	2	2⅛

_____ 5. The yardage requirement table for various views, sizes, and widths of fabric is found on the _____.
A. back of the pattern envelope
B. front of the pattern envelope
C. guide sheet

_____ 6. Which of the following types of information would *not* be found on the pattern envelope?
A. A description of the garment.
B. Suggested fabric from which to construct the garment.
C. A list of pattern pieces needed for the garment view being constructed.

_____ 7. The lengthwise grain of the fabric _____.
A. runs from cut edge to cut edge
B. runs from selvage to selvage
C. forms a 45 degree angle with the selvage edge

_____ 8. The ends of woven fabric should be straightened by cutting along a pulled crosswise thread when the fabric has been _____.
A. cut from the bolt
B. torn from the bolt
C. either cut or torn from the bolt

_____ 9. To determine whether a piece of fabric is on grain, the fabric should first be folded _____.
A. crosswise
B. on the bias
C. lengthwise

_____ 10. How can you determine whether the ends of the fabric are straight with the grain?
A. Fold the fabric lengthwise to see if the raw, cut edges match.
B. See if one crosswise thread ravels from selvage to selvage without being stopped by other crosswise threads.
C. Pull on the true bias every few inches.

(Continued)

Name ____

In questions 11 through 16, match the pattern symbols with the letter that represents the symbol on the diagram. Use Diagram A for questions 11 through 13. Use Diagram B for questions 14 through 16. (Diagrams are for single-size patterns.)

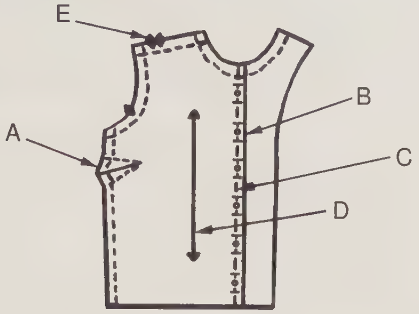


Diagram A

_____ 11. straight of grain

_____ 12. center front line

_____ 13. notch

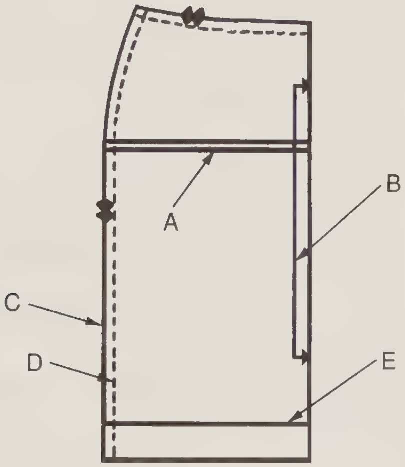


Diagram B

_____ 14. stitching line

_____ 15. place on fold line

_____ 16. lengthening or shortening

_____ 17. To see if a pattern piece is placed on the fabric straight with the grain, measure the distance from _____.
A. both ends of the grainline arrow to the center front line
B. both ends of the pattern piece to the selvage edge
C. both ends of the grainline arrow to the selvage edge

_____ 18. When pinning the pattern to the fabric, pattern pieces should _____.
A. all be placed on the fabric before pinning any of them in place
B. be placed on the fabric and pinned one at a time
C. be pinned and cut out one at a time

_____ 19. When cutting out a pattern piece, notches should be cut _____.
A. in, toward the seam allowance
B. straight across the notch
C. out, away from the seam allowance

_____ 20. Which of the following is *not* a method for removing marks left by special fabric marking pens?
A. Apply a cleaning compound made especially to remove the marks.
B. Rub marks gently with a dampened cloth.
C. Allow the marks to fade without doing anything.

(Continued)

Name ________________________________

_____ 21. Which of the following statements is true about using tracing paper to mark pattern symbols?

A. The garment must be laundered to remove markings.
B. Always test tracing paper on a fabric swatch before using it to be sure marks can be removed.
C. Marking should always be done on the right side of the fabric.

_____ 22. The best method to use when transferring pattern symbols to a thick, fuzzy fabric would be _____.

A. tailor's tacks
B. pins and chalk
C. fabric marking pen

_____ 23. The rule to follow when threading the sewing machine needle is to thread the needle from _____.

A. the side of the last thread guide
B. right to left
C. left to right

_____ 24. When the bobbin thread lies along the lower surface of the fabric, which statement below would be correct?

A. The upper tension is too loose, so the tension regulator is turned to a smaller number.
B. The upper tension is too tight, so the tension regulator is turned to a smaller number.
C. The upper tension is too loose, so the tension regulator is turned to a larger number.

_____ 25. How should a sewing machine needle be placed in a machine?

A. Flat side of shank toward the front.
B. Flat side of shank to the right.
C. Flat side of shank toward the back.

_____ 26. The purpose of the sewing machine feed dog is to _____.

A. hold the thread in place
B. move the fabric along
C. control tightness of the thread and move the thread through the machine

_____ 27. The correct direction for pressing horizontal darts is _____.

A. up, toward the armhole
B. down, toward the hem
C. in either direction

_____ 28. The general rule for pressing is to press _____.

A. each piece immediately after stitching
B. when the garment is finished
C. after several steps have been completed

_____ 29. Which of the following garment areas should be pressed on the curved surface of a pressing ham?

A. The darts.
B. The hems.
C. The cuff seams.

(Continued)

Name ________________________________

_____ 30. Plain seams are usually pressed _____.
- A. to one side
- B. on a curved surface
- C. open, using the point of the iron

_____ 31. In general, vertical darts should be pressed to the _____.
- A. right
- B. center of the garment
- C. left

_____ 32. The purpose of staystitching is to prevent _____.
- A. raveling while the garment is being made
- B. facings from showing on the right side of the garment
- C. stretching while the garment is being made

_____ 33. When should staystitching be done?
- A. As the first stitching process on a garment piece.
- B. Just before the final pressing.
- C. At any point during the construction process.

_____ 34. The direction for staystitching should be _____.
- A. from the narrow to the wide part of the garment piece
- B. away from the center of the garment piece
- C. with the grain of the fabric

_____ 35. Where should staystitching be done?
- A. ¼ inch from the cut edge of a garment piece.
- B. ½ inch from the cut edge of a garment piece.
- C. On the seamline of a garment piece.

_____ 36. A plain seam is stitched with _____.
- A. right sides of the garment pieces together
- B. wrong sides of the garment pieces together
- C. the right side of one garment piece against the wrong side of the other garment piece

_____ 37. How far from the cut edge are most plain seams stitched?
- A. ⅜ inch.
- B. ½ inch.
- C. ⅝ inch.

_____ 38. If a very sturdy seam is desired, which of the following would be the best choice?
- A. Flat-felled seam.
- B. Plain seam.
- C. Double-stitched seam.

_____ 39. To conceal the seam allowance on a sheer fabric, which of the following would be the best seam choice?
- A. Plain seam.
- B. French seam.
- C. Flat-felled seam.

(Continued)

Name ______________________________

_____ 40. Which of the seam allowances in a shirt is *not* trimmed?
A. The facing seam allowance.
B. The side seam allowance.
C. The neckline seam allowance.

_____ 41. The purpose of trimming seam allowances is to _____.
A. relieve the strain on the seam allowance
B. eliminate bulk
C. allow the seam to spread and make a smooth curve

_____ 42. Seam allowances that need trimming should be trimmed to _____.
A. ¼ inch
B. 1⁄16 inch
C. ½ inch

_____ 43. The term *grading* means to _____.
A. clip through the various layers of the seam allowance
B. trim the seam allowance
C. trim each layer of the seam allowance to a different width

_____ 44. If the guide sheet tells you to clip a seam allowance, what should you do?
A. Cut into the seam allowance several times at right angles to the seamline.
B. Cut off part of the seam allowance at center front.
C. Cut into the seam allowance at center front.

_____ 45. When using heavy fabric that ravels, which of the following seam finishes would work best?
A. Turned and stitched.
B. Stitched and pinked.
C. Zigzagged or serged.

_____ 46. Which of the following is *not* a reason for finishing seam edges?
A. To prevent the seam from raveling during laundering and wearing.
B. To give the interior of the garment a finished look.
C. To prevent the seam allowances from stretching.

_____ 47. When using very lightweight fabric that ravels, which of the following seam finishes would work best?
A. Stitched and pinked.
B. Turned and stitched.
C. Pinked.

_____ 48. The selection of a seam finishing method to be used on a garment depends mostly on _____.
A. the fabric weight
B. the garment design
C. the care requirements of the finished garment

_____ 49. To clean finish the raw edge of a garment piece, you would turn the edge under _____.
A. ⅛ inch
B. ½ inch
C. ¼ inch

(Continued)

Name ______________________________

____ 50. The purpose of clean finishing the raw edge of a garment piece is to ____.
A. maintain the grainline
B. prevent raveling
C. prevent stretching

____ 51. Which of the following garment pieces should be clean finished?
A. Sleeve placket.
B. Neckline seam.
C. Facing.

____ 52. The purpose of understitching is to ____.
A. keep the facing turned to the underside
B. form a line on which to turn under the hem
C. keep the outside edge of the facing from raveling

____ 53. To understitch, you would ____.
A. stitch through the facing, seam allowance, and the outer layer of the garment
B. stitch ¼ inch from the raw edge of the facing, turn under, press, and stitch again close to the folded edge
C. stitch the facing to the seam allowance close to the seamline

____ 54. Which of the following garment areas might be understitched?
A. Collar.
B. Waistline seam.
C. Placket opening.

____ 55. Gathering requires the use of ____.
A. one row of stitching
B. two rows of stitching
C. three rows of stitching

____ 56. When the instruction sheet tells you to ease the shoulder seam, this means to ____.
A. sew two lines of long stitches on the shoulder seam allowance
B. match notches and work in the extra fabric
C. match the garment pieces at the neckline and trim off the extra at the shoulder

____ 57. The size of stitches used for gathering as compared to those used for seams should be ____.
A. longer
B. shorter
C. the same size

____ 58. In which of the following areas of a garment is there *no* ease?
A. Waist seam.
B. Underarm portion of armhole seam.
C. Placket opening.

Using the Student Program Plan Sheet

The questions in the pretest related only to the lessons listed in Section A of the chart on the next page. To determine which lessons in this section you will need to complete, refer to your corrected pretest. Circle the numbers in the first column of the chart that correspond to the test questions you answered correctly. The numbers in the second column tell how many questions must be answered correctly to exempt you from completing each lesson. If you have missed more than the allowed number of questions from any lesson, place a check in the third column. This will indicate that you need to complete the lesson.

Your pretest may indicate that you do not need to complete a specific lesson. However, your teacher may ask that certain lessons be completed by all students. For instance, your teacher may ask everyone to complete the lesson on operating the sewing machine. He or she may feel that everyone in the class needs to learn to operate the sewing machines in your classroom.

You were not asked questions related to the lessons in Section B of the chart for several reasons. First, some of these lessons include information that even experienced students may need to review. Second, some of these skills are more advanced and may not be included in every basic sewing class. The lessons on sergers fall into this group. Finally, some of these lessons involve skills that are best tested through demonstration rather than with written questions. Your teacher will tell you which lessons in Section B you are to complete.

After your teacher has explained your class requirements, complete your plan sheet. Your teacher will then tell you how to use it to schedule activities on your weekly plan sheet.

Name ______________________________

Date ________________ Period __________

Student Program Plan Sheet

Section A			
Questions Answered Correctly (Circle)	**Correct Number Needed**	**Lessons to Be Completed (✓)**	**Lessons**
1 2 3	3		1–Taking Measurements & Selecting Size
4 5 6	3		2–The Pattern Envelope
7 8 9 10	3		4–Fabric Preparation
11 12 13 14 15 16	5		6–Pattern Symbols
17 18 19	3		8–Pattern Layout, Pinning, & Cutting
20 21 22	3		9–Transferring Pattern Symbols
23 24 25 26	4		11–Operating the Sewing Machine
27 28 29 30 31	4		12–Pressing As You Sew
32 33 34 35	3		13–Staystitching
36 37 38 39	4		14–Seams
40 41 42 43 44	4		15–Clipping, Notching, Trimming, & Grading
45 46 47 48	4		16–Seam Finishes
49 50 51	3		17–Clean Finishing
52 53 54	3		18–Understitching
55 56 57 58	3		19–Easing & Gathering
Section B			
Number of lessons from Section A to be completed. ________ Number of lessons from Section B to be completed. ________ Total ________			3–Making Fabric Choices
			5–Reading the Instruction Sheet
			7–Pattern Adjustments
			10–Small Equipment & Notions
			20–Interfacing
			21–Topstitching
			22–Hand Stitching
			23–Hemming Methods
			44–Operating the Serger Machine
			45–Serger Construction Techniques
			46–Constructing a Serged Project
			47–Applying Surface Designs

Name ______________________________

Date ____________________ Period ____________

Weekly Plan Sheet

This sheet is divided into blocks for planning your weekly learning. In the first column, list the dates of each of your classes.

In the second column, fill in what topics or activities are to be covered each day. These topics should include each of the lessons checked on your "Student Program Plan Sheet." Be sure to note when demonstrations will be given and when assignments will be due. Also note when each of the steps of your sewing project should be completed. Your teacher will provide you with this information and tell you how many weeks in advance to plan.

At the end of each class period, record in the third column what you actually accomplished. This will help you see whether or not you are on schedule. It will also show you what topics you missed during an absence. You and your teacher can use this record to evaluate your progress.

Date	Topic or Activity	Accomplishments

(Continued)

Date	Topic or Activity	Accomplishments

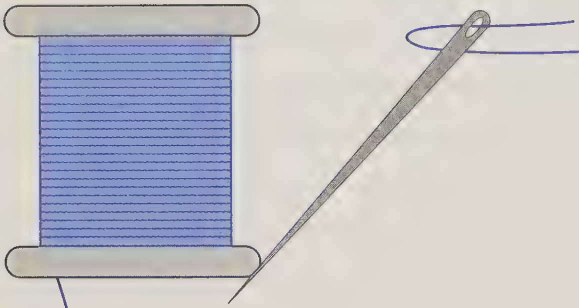
(Continued)

Date	Topic or Activity	Accomplishments

(Continued)

Date	Topic or Activity	Accomplishments

notes



Unit 3

Learning the Basics

Unit 3

Learning the Basics

This unit consists of lessons about basic sewing information. Studying these lessons will help you become familiar with common sewing terms and techniques. If you are a beginner, you will need to study all of the lessons. If you have sewing experience, you may not need to study every lesson. The pretest you took in Unit 2 will help pinpoint skills with which you are not familiar. You and your teacher can use this information to decide which lessons you need to complete.

Your teacher will tell you how the lessons in this unit are to be completed. You may complete some of the lessons on your own. Your teacher may give demonstrations and lead class discussions for some lessons. Other lessons may be completed working with your classmates in small groups.

As you study each lesson, read the information carefully. Complete the activities and turn them in for evaluation according to your teacher's instructions. The lessons include five sections.

Objectives

This part of the lesson will tell you what you are to learn. It will list skills you should be able to demonstrate after you have finished studying the lesson.

Words to Know

This part of the lesson will list basic sewing terms that are introduced in the lesson. (This part is not included in lessons where no new terms are introduced.) As you read, watch for these words and become familiar with their meanings.

Gathering Information

This part of the lesson will provide information about a basic sewing skill. It is divided into sections to help you remember specific points. Illustrations are often used to help increase your understanding of the lesson. You will be learning other sewing skills based on this information. Therefore, read this part of the lesson carefully and refer back to it as needed.

Practicing Activities

This part of the lesson will provide you with skill-building activities. You may be asked to interpret or restate the information you have just read. You may also be asked to demonstrate a technique or practice making actual samples.

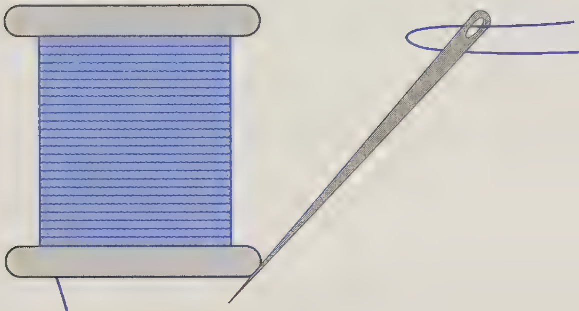
Some of the activities may be turned in to your teacher. Others you may keep for your own reference. In both cases, you should be prepared to discuss your work as you complete the activities.

Evaluating Learning

This part of the lesson will help you see what you have learned. It may also point out skills or information that you need to study further.

Some evaluation activities include forms for evaluating samples completed as practice activities. Both you and your teacher can use these forms. You may be asked to complete these forms so you can assess your learning. Your teacher may wish to complete them so he or she can keep track of your progress. In either case, they can be used to identify areas of weakness and success in your learning of sewing skills.

notes



Lesson 1

Taking Body Measurements and Selecting Your Pattern Size

Objectives

This lesson will help you to

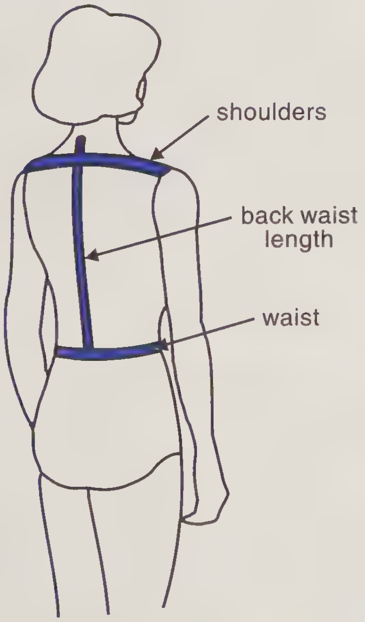
- identify how body measurements are taken for both men and women.
- take your own body measurements with the assistance of another individual.
- use a measurement chart to find your body type and pattern size.

Gathering Information

One of the first sewing decisions you will have to make is choosing a pattern to fit your body. Selecting the correct size depends on taking accurate body measurements. It also requires knowing which pattern body type is most suitable for you. This lesson will help you to make these decisions.

The following information gives instructions for taking measurements and determining pattern size for both men and women. Read all the information giving special attention to the portion that pertains to your body.

How to Take Women's Measurements



Note: For greatest accuracy, women should have their measurements taken while wearing undergarments or leotards.

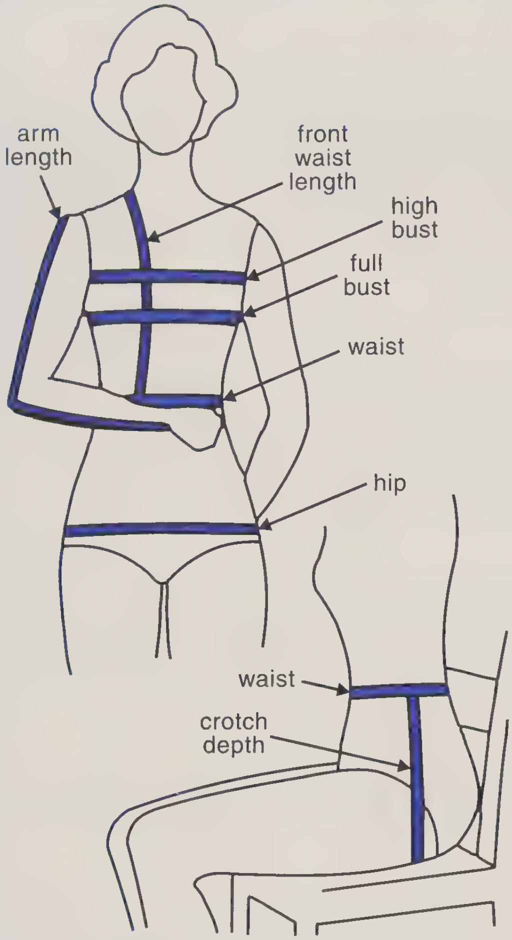
Height. Without wearing shoes, stand with your back against the wall. Find your height on the wall by placing a level object, such as a ruler, on your head. Mark where the object touches the wall. Measure from the floor to the mark.

Waist. Tie a string around your waist area. It will roll to your natural waistline. Use the string as a guide for placing the tape measure around your waist. Hold the tape snug but not tight.

Back waist length. Measure down from the most prominent bone at the back of the neck to the string tied at your waist.

Shoulders. Measure across the back from shoulder bone to shoulder bone.

(Continued)



Full bust. Holding the tape snug but not tight, measure over the fullest part of the bust. The tape should ride over the shoulder blades in the back.

High bust. Measure around the widest part of the back, under the arms, and above the full bustline.

Hips. Measure around the fullest part of the hips. This should be 7 to 9 inches below the waist. Make a note of how far below the waist you took your hip measurement.

Arm length. With your arm bent in front of you, measure around the elbow from the shoulder bone to the wrist bone.

Front waist length. Measure from below the ear on the shoulder, over the bust to the string at your waist.

Crotch depth. While sitting on a flat surface, measure from the waist to the flat surface.

How to Select Figure Type for Women

Pattern companies have developed several figure types for women, including *Misses, Misses Petite, Women's, Women's Petite, and Juniors.* These vary in height, waist length, and body proportion. Age is not an indication of figure type.

To determine your figure type, look at a chart located in a pattern catalog or one provided by your teacher. Read the description of each figure type and select the best one for you. Base your decision on your description, height, and body measurements.

New technology has made it possible to order customized patterns to fit your body. You can get perfect fit with little or no additional pattern alteration. You simply send your body measurements to the company providing this service. The company then creates a personalized pattern just for you. You can choose from available patterns or use the options section in the company catalog and be your own designer. These patterns are available to women of all shapes and sizes.

How to Take Men's Measurements

Note: For greatest accuracy, men should have their measurements taken while wearing an undershirt and lightweight pants.

Height. Same as women.

Neck band. Measure around the base of the neck. Add ½ inch to your measurement for comfort.

Waist. Start at the navel and measure around the body.

Hips (seat). Measure around the widest part of the hip area.

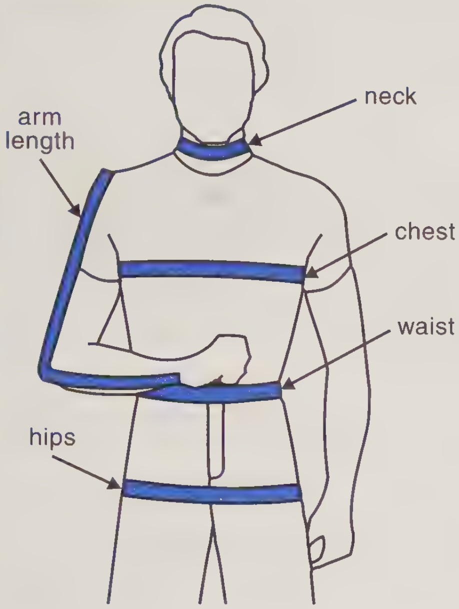
Chest. Place the tape under the arms and measure around the fullest part of the chest.

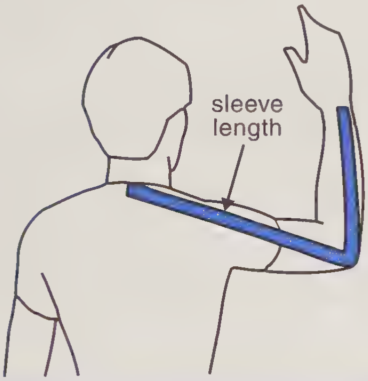
Crotch depth. Same as women.

Inseam. Measure from the crotch along the inside of the leg to the desired hem length.

Arm length. The arm should be bent at a right angle. Measure from the shoulder bone under the elbow to the wrist bone.

Sleeve length. Bend arm at a right angle. Measure from the top of the spine around the elbow to the wrist bone.





How to Find Pattern Size for Men and Women

Compare your measurements to those listed under your body type on a figure chart. Sizes appear as numbers (8, 10, 12, and so forth) or letters (A, B, C, and so forth). Be sure to follow the pattern company's guidelines for selecting pattern size. Also, consider the following guidelines:

- If you fall between two sizes, select the larger size if you prefer a looser fit.
- For coats, jackets, shirts, and dresses, select pattern size by the bust or chest measurement.
- For slacks, skirts, and shorts, women should select their pattern sizes by the hip measurement; men, by waist measurement.

Name ______________________________
Date ________________ Period __________

Activity 1-1: Practicing Taking Women's Measurements

Supplies needed:

- tape measure
- ruler
- string

Complete the chart below. Begin by asking someone to help you take your measurements. Then find your body type and pattern size. To make your selection, use a chart found in a pattern catalog or one provided by your teacher.

Measurements—Women

To find body type
Height __________
Back waist length __________

To find pattern size
Full bust __________
Waist __________
Hips __________

Additional measurements
High bust __________
Crotch depth __________
Arm length __________
Shoulders __________
Front waist length __________

Body Type __________

Dress/Blouse pattern size
(select by bust measurement*)
____

Pant pattern size
(select by hip measurement)
____

*If there is more than a 2-inch difference between your full bust and high bust measurements, select the pattern size by your high bust measurement. This will give you a better fit through the shoulders, chest, and upper back. Alter the pattern through the bust, as necessary.

Name ______________________________

Date ________________ Period __________

Activity 1-2: Practicing Taking Men's Measurements

Supplies needed:

tape measure
ruler

Complete the chart below. Begin by asking someone to help you take your measurements. Then find your pattern size using a chart found in a pattern catalog or one provided by your teacher.

Measurements—Men

To find pattern size

Height ________
Neck band (add ½" to your measurement) ________
Chest ________
Waist ________
Hips (seat) ________
Sleeve length ________

Shirt/Jacket pattern size (select by chest measurement) ________

Pant pattern size (select by waist measurement) ________

Additional measurements

Crotch depth ________
Inseam ________
Arm length ________

Name ____________________

Date ____________ Period ________

Activity 1-3: Evaluating Learning

Check your understanding of taking measurements, selecting body type, and selecting pattern size by taking the quiz below.

1. If you were going to make a shirt or jacket, you would pick a pattern that fits your ____________ measurement.

2. If a woman were going to make slacks, she would purchase a pattern that fits her ____________ measurement.

3. Crotch depth is measured from the ____________ to a flat surface while sitting.

4. A man's sleeve length is measured from the ____________ to the ____________ with the arm bent.

5. A woman's arm length is measured from the ____________ to the ____________ with the arm bent.

6. Explain how to measure your height.
   ____
   ____

7. The inseam is measured from the ____________ to ____________.

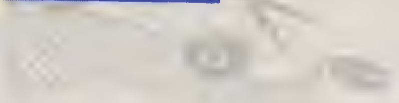
8. If your measurements fall between two sizes on the chart, would you select the larger or smaller size? ____________ Justify your answer. ________
   ____

9. Would two women who have the same bust, waist, and hip measurements necessarily be the same body type? ____________ Explain your answer.
   ____
   ____

10. Briefly, explain how you should go about finding your pattern size.
    ____
    ____

Lesson 2

The Pattern Envelope



Objectives

This lesson will help you to

- identify the various types of information that may be found on a pattern envelope.
- use the information on a pattern envelope.

Words to Know

multisized pattern
stable knit
stretch knit
napped fabric
notion

Gathering Information

The pattern envelope is an important source of sewing information. It offers guidelines for selecting and purchasing all the materials you will need to construct your project. Making use of this information will get your sewing project off to a good start. As you read the following information, refer to the diagram on page 41.

Pattern Classifications

Pattern companies have attempted to make sewing easier for beginners by labeling patterns to indicate the level of difficulty. The level of difficulty may be based partly on the number of pattern pieces included in the envelope. The estimated amount of time needed to complete the pattern may be another factor that determines difficulty.

Patterns for beginners require few detailed sewing skills, such as applying zippers and constructing collars. Most beginner patterns call for easy-to-handle fabrics. Some include how-to-lessons on fashion, fabric, and sewing techniques.

Photographs and Fashion Sketches

The front of the pattern envelope shows photographs or fashion sketches of finished garments. This allows you to see what each garment will look like. Some patterns allow you to vary design details, such as sleeve length or collar treatment. In this case, different views of the garment will appear to show each variation.

Figure Type and Size

The pattern size and, in most cases, figure type will appear on the front of a pattern envelope. Most patterns are multisized. ***Multisized patterns*** include cutting lines for several sizes. For instance, size 8, 10, and 12 may all appear on the same pattern tissue. Multisized patterns are helpful when different areas of the body require different sized patterns. Some multisized patterns even include different cup sizes for patterns requiring fit through the bustline.

Back View Illustrations

The back of the pattern envelope shows a line drawing of the back of each garment. This allows you to see design details such as darts and zippers that cannot be seen on the front illustrations.

Garment Descriptions

The pattern envelope gives a brief description of each of the garments that can be made with the pattern. This information will make you aware of design details that may be hard to see in the illustrations.

Suggested Fabrics

Fabric weight, design, and hand (the way a fabric feels and drapes) affect the way a garment looks and fits. For instance, sporty shorts would not look or fit right if they were made from a sheer fabric. The pattern envelope tells what fabrics are appropriate for the garment being made. Using this information will help you select fabric for a finished garment that you will enjoy wearing.

Knit Gauges

When a pattern envelope suggests knit fabrics, you must be careful to select the right type of knit. There are basically two classifications of knit fabrics—stable knits and stretch knits. ***Stable knits*** have a limited degree of stretch.

(Continued)

They generally require the same sewing techniques as woven fabrics. ***Stretch knits*** have greater stretch and require special sewing techniques.

With stable knit fabrics, you may use any pattern except one labeled for stretch knits. If you use a stretch knit pattern, your garment will be too small.

Stretch knit fabrics should be used only with patterns stating that they have been sized for stretch knits. Such a label indicates that, because the fabric will stretch, the pattern has been sized with less ease. If you do not use a stretch knit pattern with stretch knit fabric, your garment will be too large.

Most stretch knit patterns include a knit gauge on the envelope. This gauge allows consumers to measure the amount of stretch in knit fabrics. In this way, consumers can tell if the fabric they select has enough stretch for a given pattern design.

Body Measurements

The pattern envelope lists some basic body measurements for the different pattern sizes. This is to help you make sure you have selected the right size pattern for your body. You will notice that these measurements are given in centimeters as well as inches. This is because many American pattern companies sell their patterns in countries where metric measures are commonly used.

Yardage Requirements

A chart on the pattern envelope tells you how much fabric is needed to make the garment. This is known as the yardage requirement. To read the chart, start by finding the garment view you wish to make. Under this heading, find the row labeled with the width of the fabric you are purchasing. Follow this row across to the column labeled with your size. This number is the number of yards of fabric you need to buy to make the garment.

Napped fabrics are those fabrics that have short fibers brushed up on the surface. Corduroy, velvet, and velveteen are examples of fabrics that have napped surfaces.

(Continued)

When using napped fabrics, all pattern pieces must be laid in the same direction. Otherwise, a variation in color will appear on the finished garment. This variation is due to the way light reflects off the brushed surface. For this reason, many pattern designs are inappropriate for napped fabrics. Generally, patterns with little detail are best. The pattern envelope will usually indicate if a napped fabric is suitable for the pattern selected.

Because all pattern pieces must be cut out in the same direction, more yardage is required when using napped fabrics. The envelope will usually use asterisks (*) to indicate which yardage requirements are for napped fabrics. These yardage requirements should also be followed when buying fabrics with a one-way design.

The envelope also gives the yardage required for interfacing. Always purchase your interfacing at the same time you purchase your fashion fabric. Interfacing is a necessity. You will not want to stop sewing to buy interfacing at a later time. Interfacing will be discussed further in Lesson 20, "Interfacing."

Like the body measurements, yardage requirements are given in metric measurements as well as measurements in inches and yards. For instance, most fabric is sold in widths of 44/45 and 58/60 inches. In metric units, these same measurements would be 115 and 150 centimeters, respectively. You may wish to familiarize yourself with metric measures. You will find them on patterns and some sewing equipment as well as pattern envelopes.

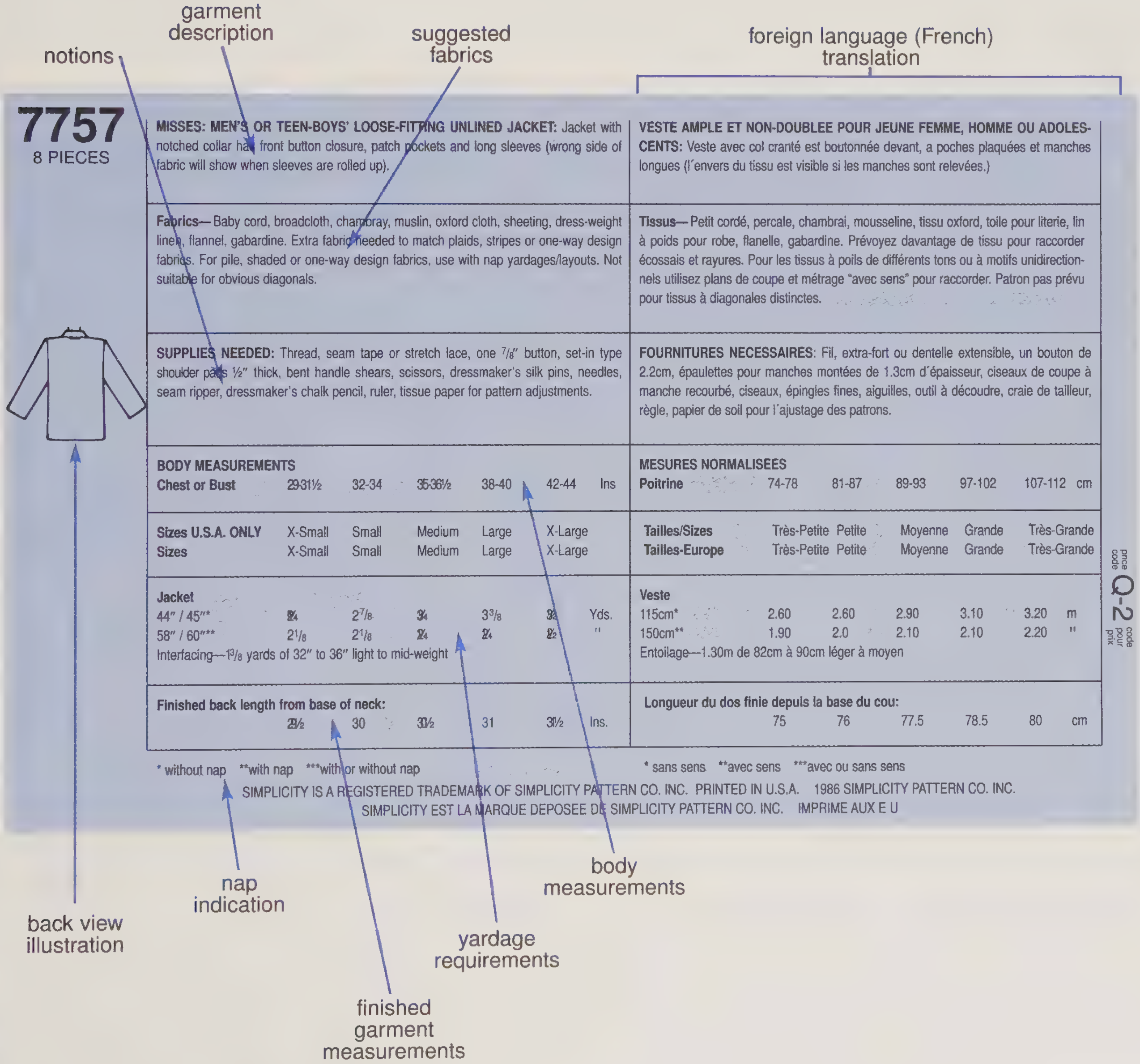
Notions

The word ***notion*** refers to all the supplies that will be needed to complete a project. Elastic, thread, buttons, bias tape, zippers, and trims are all notions. All of the notions you will need are listed on the back of the pattern envelope.

Purchase all of the notions for your garment when you buy the fabric. In this way, you can make sure your thread, buttons, and other notions match your fashion fabric. You can also avoid making an extra trip to the store.

Finished Garment Measurements

The pattern envelope will often list finished measurements for important areas of a garment. This information will tell you how much ease is provided in the bust, waist, or hips. It will also tell you the length of the garment or bottom width. This information can be very helpful in determining how your garment will look and fit. It will also help you decide if you need to alter a pattern to achieve a better fit. Follow the directions on the instruction sheet for using this information when selecting the best cutting lines on a multisized pattern.


notions
garment description
suggested fabrics
foreign language (French) translation
back view illustration
nap indication
finished garment measurements
yardage requirements
body measurements

7757
8 PIECES

MISSES: MEN'S OR TEEN-BOYS' LOOSE-FITTING UNLINED JACKET: Jacket with notched collar has front button closure, patch pockets and long sleeves (wrong side of fabric will show when sleeves are rolled up).

Fabrics— Baby cord, broadcloth, chambray, muslin, oxford cloth, sheeting, dress-weight linen, flannel, gabardine. Extra fabric needed to match plaids, stripes or one-way design fabrics. For pile, shaded or one-way design fabrics, use with nap yardages/layouts. Not suitable for obvious diagonals.

SUPPLIES NEEDED: Thread, seam tape or stretch lace, one 7/8" button, set-in type shoulder pads ½" thick, bent handle shears, scissors, dressmaker's silk pins, needles, seam ripper, dressmaker's chalk pencil, ruler, tissue paper for pattern adjustments.

BODY MEASUREMENTS						
Chest or Bust	29-31½	32-34	35-36½	38-40	42-44	Ins
Sizes U.S.A. ONLY	X-Small	Small	Medium	Large	X-Large	
Sizes	X-Small	Small	Medium	Large	X-Large	
Jacket						
44" / 45"*	2¾	2 7/8	3¼	3 3/8	3½	Yds.
58" / 60"**	2 1/8	2 1/8	2¼	2¼	2½	"
Interfacing—1 3/8 yards of 32" to 36" light to mid-weight						
Finished back length from base of neck:	29½	30	30½	31	31½	Ins.

* without nap **with nap ***with or without nap

VESTE AMPLE ET NON-DOUBLEE POUR JEUNE FEMME, HOMME OU ADOLESCENTS: Veste avec col cranté est boutonnée devant, a poches plaquées et manches longues (l'envers du tissu est visible si les manches sont relevées.)

Tissus— Petit cordé, percale, chambrai, mousseline, tissu oxford, toile pour literie, lin à poids pour robe, flanelle, gabardine. Prévoyez davantage de tissu pour raccorder écossais et rayures. Pour les tissus à poils de différents tons ou à motifs unidirectionnels utilisez plans de coupe et métrage "avec sens" pour raccorder. Patron pas prévu pour tissus à diagonales distinctes.

FOURNITURES NECESSAIRES: Fil, extra-fort ou dentelle extensible, un bouton de 2.2cm, épaulettes pour manches montées de 1.3cm d'épaisseur, ciseaux de coupe à manche recourbé, ciseaux, épingles fines, aiguilles, outil à découdre, craie de tailleur, règle, papier de soil pour l'ajustage des patrons.

MESURES NORMALISEES						
Poitrine	74-78	81-87	89-93	97-102	107-112	cm
Tailles/Sizes	Très-Petite	Petite	Moyenne	Grande	Très-Grande	
Tailles-Europe	Très-Petite	Petite	Moyenne	Grande	Très-Grande	
Veste						
115cm*	2.60	2.60	2.90	3.10	3.20	m
150cm**	1.90	2.0	2.10	2.10	2.20	"
Entoilage—1.30m de 82cm à 90cm léger à moyen						
Longueur du dos finie depuis la base du cou:	75	76	77.5	78.5	80	cm

* sans sens **avec sens ***avec ou sans sens

price code **Q-2** code pour prix

SIMPLICITY IS A REGISTERED TRADEMARK OF SIMPLICITY PATTERN CO. INC. PRINTED IN U.S.A. 1986 SIMPLICITY PATTERN CO. INC.
SIMPLICITY EST LA MARQUE DEPOSEE DE SIMPLICITY PATTERN CO. INC. IMPRIME AUX E U

Name ______________________________

Date ____________________ Period ____________

Activity 2-1: Investigating Pattern Classifications

Supplies needed:

pattern catalogs

Pattern companies use different classifications to indicate the difficulty level of a pattern. Some labels suggest the amount of time required to construct a garment. Look through various pattern catalogs. Select two catalogs that differ in how patterns are labeled for difficulty or construction time. For each of the pattern catalogs you select, list the various labels and classifications used. Give a brief description of those you find.

Pattern Company A ______________________________

Classifications:

Pattern Company B ______________________________

Classifications:

Name ______________________________

Date ________________ Period __________

Activity 2-2: Gathering Information About Special Fabrics

Napped fabrics. In the box below, mount a swatch of a napped fabric. Then answer the questions that follow. You may refer to the information in the "Yardage Requirements" box.

1. In your own words, give a definition of napped fabric.

____

____

____

2. How must pattern pieces be placed when using a napped fabric?

____

____

Why? __________________________

____

3. What type of pattern designs are best suited for napped fabrics?

____

4. Why is it important to know if your fabric is napped when purchasing the required yardage?

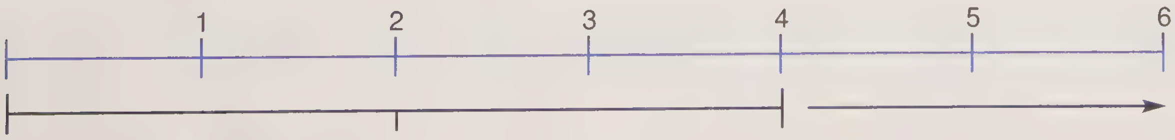
____

____

Stretch fabrics. Obtain a sample of stretch fabric from your teacher. Place four inches of the fabric crosswise along the knit gauge below as indicated. The fabric should be in a relaxed state.

Hold the left edge of the fabric securely in place. Use your fingers to mark the other end of the four-inch strip. Gently stretch the fabric to the right. If the upper edge starts to curl, you have stretched the fabric too much. Mark on the gauge where the fabric reaches when you have stretched it to its farthest point. If the fabric stretches to the end of the gauge, it is appropriate for stretch knit patterns.

After determining the fabric's stretch, release the pressure to find its recovery characteristics. If the fabric springs back, it probably will not sag or stretch out of shape when worn. If the fabric does not spring back, you will need to take special precautions during construction to prevent sagging.



Place fabric in relaxed state along here.

Stretch fabric and place mark at farthest point.

(Continued)

Name ______________________________

In the box below, mount a swatch of the knit fabric you tested with the knit gauge. Then complete the exercises and answer the questions that follow. You may refer to the information in the "Knit Gauges" box.

1. In your own words, give a definition of stable knit fabric.
2. Give a definition of stretch knit fabric.
3. What type of knit is the swatch you have mounted on this page?
4. What type of patterns should be used when sewing with stable knits?
5. What type of patterns should be used when sewing with stretch knits?
6. What problems might occur if the pattern is not correctly suited to the type of knit?
7. Explain, in your own words, how to use a knit gauge.

Name ____________________

Date ____________ Period ________

Activity 2-3: Practicing Using a Pattern Envelope

For each problem below, you will be given a pattern envelope and specific data such as size, view, and type of fabric. You will also be given a list of information you are to find on the envelope based on this data. Record the given data and your answers in the spaces provided.

1. Use pattern envelope # ________

Given data: ____________________

____

Find the following information:	Answers:

2. Use pattern envelope # ________

Given data: ____________________

____

Find the following information:	Answers:

3. Use pattern envelope # ________

Given data: ____________________

____

Find the following information:	Answers:

4. Use pattern envelope # ________

Given data: ____________________

____

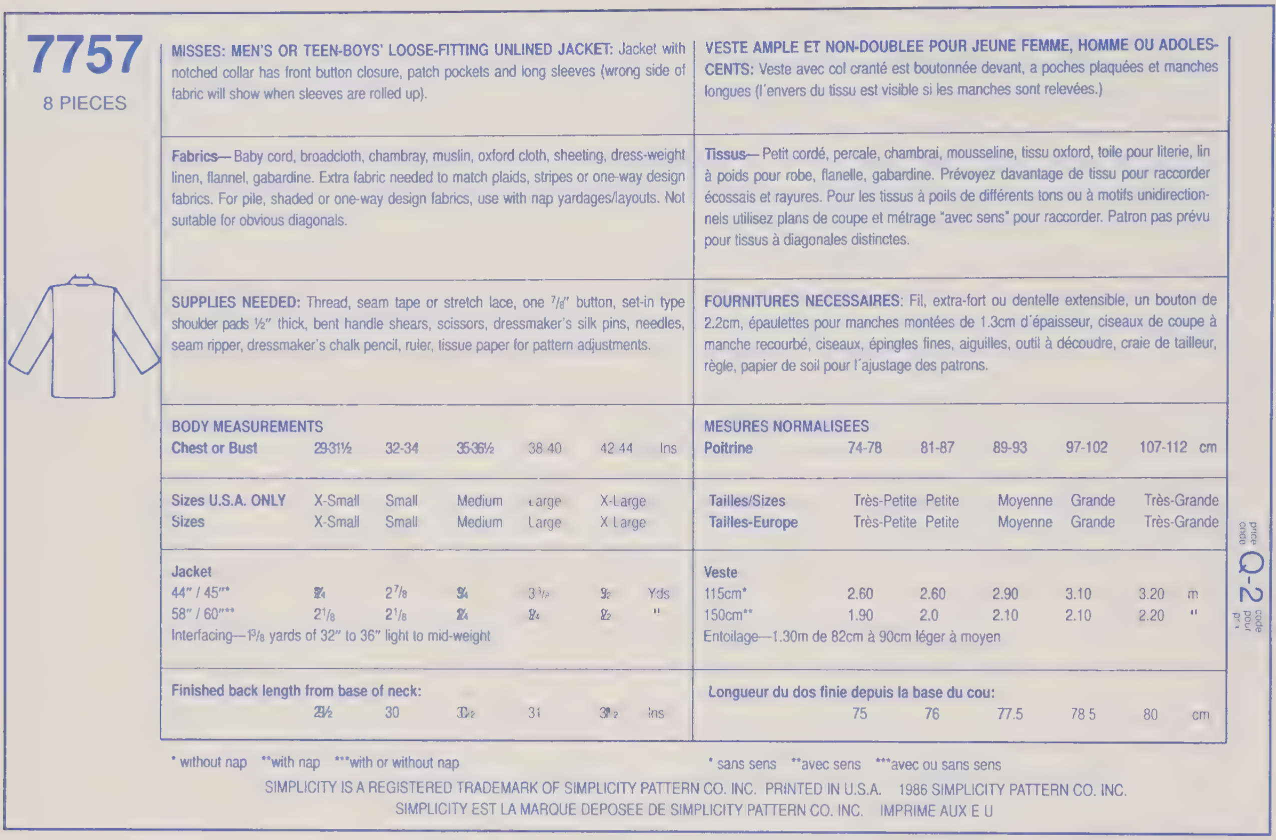
Find the following information:	Answers:

Name ____________________

Date ______________ Period ________

Activity 2-4: Evaluating Learning

Use the pattern envelope below to answer the following questions. Write your answer in the space following each question. Then place the appropriate letter in the blank before each question to indicate where on the envelope you found the information.



7757

8 PIECES

MISSES: MEN'S OR TEEN-BOYS' LOOSE-FITTING UNLINED JACKET: Jacket with notched collar has front button closure, patch pockets and long sleeves (wrong side of fabric will show when sleeves are rolled up).

Fabrics—Baby cord, broadcloth, chambray, muslin, oxford cloth, sheeting, dress-weight linen, flannel, gabardine. Extra fabric needed to match plaids, stripes or one-way design fabrics. For pile, shaded or one-way design fabrics, use with nap yardages/layouts. Not suitable for obvious diagonals.

SUPPLIES NEEDED: Thread, seam tape or stretch lace, one ⅞" button, set-in type shoulder pads ½" thick, bent handle shears, scissors, dressmaker's silk pins, needles, seam ripper, dressmaker's chalk pencil, ruler, tissue paper for pattern adjustments.

BODY MEASUREMENTS						
Chest or Bust	29-31½	32-34	35-36½	38 40	42 44	Ins
Sizes U.S.A. ONLY	X-Small	Small	Medium	Large	X-Large	
Sizes	X-Small	Small	Medium	Large	X Large	
Jacket						
44" / 45"*	2¾	2⅞	3¼	3⅜	3½	Yds
58" / 60"***	2⅛	2⅛	2¼	2¼	2½	"
Interfacing—1⅜ yards of 32" to 36" light to mid-weight						
Finished back length from base of neck:	29½	30	30½	31	31½	Ins

* without nap **with nap ***with or without nap

VESTE AMPLE ET NON-DOUBLEE POUR JEUNE FEMME, HOMME OU ADOLESCENTS: Veste avec col cranté est boutonnée devant, a poches plaquées et manches longues (l'envers du tissu est visible si les manches sont relevées.)

Tissus—Petit cordé, percale, chambrai, mousseline, tissu oxford, toile pour literie, lin à poids pour robe, flanelle, gabardine. Prévoyez davantage de tissu pour raccorder écossais et rayures. Pour les tissus à poils de différents tons ou à motifs unidirectionnels utilisez plans de coupe et métrage "avec sens" pour raccorder. Patron pas prévu pour tissus à diagonales distinctes.

FOURNITURES NECESSAIRES: Fil, extra-fort ou dentelle extensible, un bouton de 2.2cm, épaulettes pour manches montées de 1.3cm d'épaisseur, ciseaux de coupe à manche recourbé, ciseaux, épingles fines, aiguilles, outil à découdre, craie de tailleur, règle, papier de soil pour l'ajustage des patrons.

MESURES NORMALISEES						
Poitrine	74-78	81-87	89-93	97-102	107-112	cm
Tailles/Sizes	Très-Petite	Petite	Moyenne	Grande	Très-Grande	
Tailles-Europe	Très-Petite	Petite	Moyenne	Grande	Très-Grande	
Veste						
115cm*	2.60	2.60	2.90	3.10	3.20	m
150cm**	1.90	2.0	2.10	2.10	2.20	"
Entoilage—1.30m de 82cm à 90cm léger à moyen						
Longueur du dos finie depuis la base du cou:	75	76	77.5	78 5	80	cm

* sans sens **avec sens ***avec ou sans sens

price code Q-2 code pour prix

SIMPLICITY IS A REGISTERED TRADEMARK OF SIMPLICITY PATTERN CO. INC. PRINTED IN U.S.A. 1986 SIMPLICITY PATTERN CO. INC.
SIMPLICITY EST LA MARQUE DEPOSEE DE SIMPLICITY PATTERN CO. INC. IMPRIME AUX E U

A. back view illustration	E. body measurements
B. garment description	F. yardage requirements
C. suggested fabrics	G. notions
D. knit gauge	H. finished garment measurements

____ 1. What kind of closure is used on the front of this jacket? ____________

____ 2. What size pattern should someone with a 38-inch chest select? ____________

____ 3. How much 60-inch wide fabric should be purchased to make this jacket in size small? ____________

____ 4. List three kinds of fabric that are suggested for making this pattern. ____________

____ 5. Is the back of the jacket pleated? ____________

____ 6. How much interfacing is needed to make this jacket? ____________

____ 7. Is it necessary to purchase a zipper when making this pattern? ____________

(Continued)

Name ______________________________

_____ 8. When will it be necessary to purchase extra fabric? ____________________

_____ 9. List four supplies that will be needed to construct this garment.

_____ 10. How much 44-inch wide fabric should be purchased to make this jacket in size large? ____________________

_____ 11. What will the finished back length of an extra large jacket be?

_____ 12. What types of fabrics are not suitable for use with this pattern?

Write the answers to questions 13 through 16 in your own words.

13. How would you find the difficulty level of a pattern before you purchased it?

14. Why are metric measures listed on pattern envelopes?

15. How do you determine the amount of yardage to purchase?

16. When constructing a garment, explain how the following information found on the pattern envelope would be helpful.

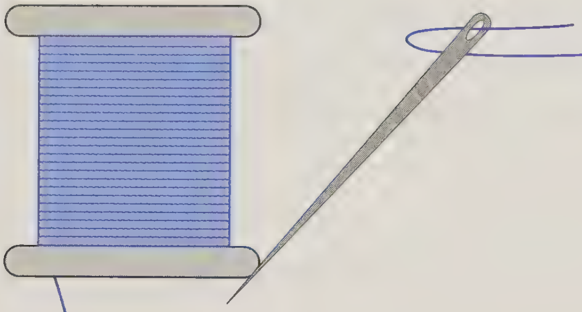
A. finished garment measurements ____________________

B. suggested fabrics ____________________

C. notions ____________________

D. garment description ____________________

notes



Lesson 3

Making Fabric Choices

Objectives

This lesson will help you to

- make generalizations about fiber and fabric characteristics from information provided.
- explain how fabric construction and applied finishes affect fabric characteristics.
- use the information provided to choose the best fibers and fabrics for various uses.

Words to Know

fiber
yarn
fabric
natural fiber
protein fiber
manufactured fiber
cellulosic fiber
noncellulosic fiber
generic name
trade name
woven fabric
plain weave
twill weave
satin weave
pile weave
knit fabric
nonwoven
blend
finish
hand
drapability

Gathering Information

Knowing the basic types of fibers and fabrics and their general characteristics will help you make wise choices when choosing fabrics for garment construction. In addition to the information that follows, charts on natural fibers, manufactured fibers, and fabrics are included on pages 55 through 57 of this lesson.

What Are Fibers?

All fabrics are made from small, hairlike ***fibers***. These can be less than an inch in length or long, continuous strands. These fibers are combined by twisting them together to form a ***yarn***. Yarns are woven, knitted, or pressed into ***fabric,*** which is a textile product.

Fibers can be separated into two major categories—natural fibers and manufactured fibers.

What Are Natural Fibers?

Natural fibers come from animals and plants. Examples of natural fibers are cotton, linen, wool, and silk.

The natural fibers may be divided into protein fibers and cellulosic fibers. ***Protein fibers*** come from animals, (wool, camel's hair, silk). ***Cellulosic fibers*** come from plants (cotton, linen).

Natural fibers are comfortable to wear and durable. They will not melt when pressed. Some of the natural fibers are expensive because of difficulty in collecting and processing them.

What Are Manufactured Fibers?

Manufactured fibers are formed from raw materials through manufacturing processes in factories. They do not occur as fibers in nature, but they may be made from some natural substances.

In 1910, rayon became the first commercially produced manufactured fiber in the United States. It was made from a fibrous substance found in all forms of plant life. The first fiber produced completely from chemicals was nylon. Nylon was commercially produced in 1939. Since then, a wide variety of manufactured fibers have been developed.

Manufactured fibers may be divided into two groups according to their composition and characteristics. The groups are cellulosic and noncellulosic. ***Cellulosic fibers*** are made from a fibrous substance found in plants. ***Noncellulosic fibers*** are made completely from chemicals.

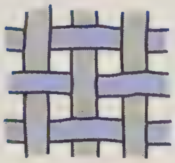
Each group of fibers has a ***generic name*** or family name. Each fiber that belongs to the same family has the same general characteristics. The generic fiber name must appear on the label of any garment or fabric that is sold. When you know the generic name of a fiber, you will know what to expect from the fiber in terms of performance and care requirements.

In addition to a general name, a fiber will also have a trade name. ***Trade names*** are used by companies to identify their fibers.

(Continued)

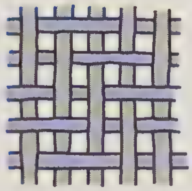
How Is Fabric Constructed?

Yarns may be woven, knitted, or pressed together to make a fabric. The method used affects the strength, appearance, feel, and care requirements of the fabric.



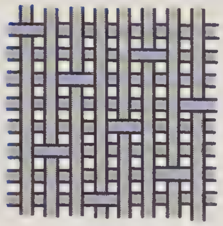
plain weave

Woven fabrics. ***Woven fabrics*** are made by interlacing yarns at right angles. By varying the pattern in which the yarns are interlaced, fabrics with different qualities are made. The most basic weave is the ***plain weave***. It is formed by interlacing each crosswise yarn with each lengthwise yarn. Plain weave fabrics are often used for shirts and dresses. These fabrics are fairly strong, durable, and easy to sew.



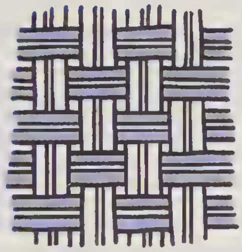
twill weave

The ***twill weave*** is formed by interlacing a yarn in one direction with two or more yarns in the other direction. Each interlacing begins one yarn over from the last one, forming a pattern of diagonal lines in the fabric. Denim and many suiting fabrics are constructed in this way. Twill fabrics are fairly strong, durable, and wrinkle resistant. They also hide soil.



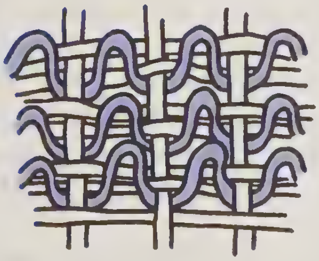
satin weave

The ***satin weave*** is formed by interlacing a yarn in one direction with four or more yarns in the other direction. Each interlacing begins two yarns over from the last one, producing fabrics with a smooth, shiny surface. These fabrics are popular for dressy blouses and dresses. Satin fabrics tend to snag and pull easily, making them less durable and harder to sew than many other fabrics. Many satin fabrics tend to wrinkle and show stains.



basket weave

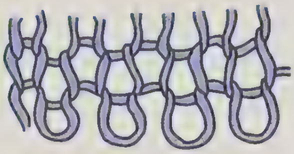
Many variations of the above basic weaves are possible. For instance, a *basket weave* is a variation of the plain weave. It is created by weaving two or more yarns as one. Oxford and monk's cloth are examples of basket weaves.



pile weave

A ***pile weave*** is created by adding extra yarns to a plain or twill weave. The yarns project from the fabric surface. Pile fabrics have a nap and must be cut out following the "with nap" layout on the pattern instruction sheet. Examples of pile weaves are corduroy, velvet, velveteen, and terry cloth.

(Continued)



knit

Knit fabrics. ***Knit fabrics*** are made by interlocking loops of a continuous length of yarn to form a ribbed fabric. This produces a fabric that stretches and returns to its original shape. Interesting knits are available for everything from sportswear and sleepwear to evening wear. A few choices include fleeces, sweater knits, jerseys, slinky knits, stretch velours, and even stretch velvet.

The types of yarns and knitting methods can vary greatly in knit fabrics. Fabrics can be thin and smooth with a high amount of stretch as in T-shirt fabric. They can also be more textured and stable as in double knit. Most knits are fairly wrinkle resistant. (Usually, the more textured the knit, the more it resists wrinkles.) Sewing with knits is fairly easy, although care must be taken to prevent stretching.

Nonwovens. ***Nonwovens*** are fabrics made by bonding fibers or yarns together into a web. The fibers may be held together be an adhesive, or they may be melted together. Nonwovens often have no grain, and they may require special sewing techniques. Nonwovens are often used for crafts and as interfacings. They are also used in disposable products, such as diapers, hospital gowns and sheets, and cleaning cloths.

Fabric Blends

Two or more fibers will often by spun, woven, or knitted together. The fabrics that are made from these combined fibers are called ***blends***. Manufacturers blend fibers together to produce fabrics with the most desirable characteristics. For instance, today's popular stretch woven fabrics are created by blending lycra with other fabrics.

Fabric Finishes

Fabric ***finishes*** are treatments used to change the feel, appearance, or performance of the fabric. For instance, the manufacturer might make a fabric stain resistant by adding a special finish. Finishes can change fiber properties, so knowing which finishes have been added is very important. The type of finish added will appear on the label.

(Continued)

Fabric finishes can be permanent, durable, or temporary. A permanent finish will last the life of the garment. A durable finish lasts only through several launderings. A temporary finish lasts only until the fabric is washed or dry cleaned. There are hundreds of fabric finishes. Read labels carefully to determine the type of finish that has been added to the fabric and how it will change the care requirements.

The following are a few common finishes:

Permanent or durable press. This finish is heat-set onto the fabric. It will improve the fabric's resistance to wrinkling in wearing and laundering. No ironing should be needed if care instructions are followed. Stains may be difficult to remove.

Shrinkage resistant. Shrinkage is controlled by this finish. Garments can be laundered without excess shrinkage. In the case of wool garments, label directions must be followed to prevent shrinkage.

Soil release. This finish aids in removing oil, grease, and dirt during laundering.

Flame-retardant. Fabrics will resist burning. Special care may be needed to maintain the finish.

Using Bolt End Labels

Today's fabrics are so carefully engineered that distinguishing various types can be impossible. The only way to determine fiber content of a fabric is to read the label on the bolt end. Since 1960, the Textile Fiber Identification Act has required that all fabrics be labeled by generic name. The law includes wearing apparel and household textile products. Each fiber that makes up 5 percent or more by total weight of a product must be named on the label. The fibers must be listed in order by weight, from the highest to the lowest.

On the charts included in this lesson, general care guidelines are given for the various fibers. Keep in mind that fabric construction, dyeing, and finishing affect the final performance of the fabric and the care required.

(Continued)

Always read labels for the fabric you select. Information about the fabric will be printed on the end of the fabric bolt. These bolt labels will tell you fiber content, brand name, fabric name, washability, and special finishes applied.

Other Methods of Checking Fabric

Checking for fiber content and finishes won't tell you everything you need to know about a fabric. Use your senses of feel and sight to determine how the fabric will behave.

Hold up a length of the fabric to check the hand and drapability. A fabric worn next to the skin should have a soft ***hand***, or feel. ***Drapability*** is the ability of fabric to fall into soft folds when placed on the body. Choose fabrics that drape well for flowing skirts and dresses. Choose stiffer fabrics for tailored pants and jackets.

Crush a handful of fabric. Does the fabric wrinkle? Do the wrinkles disappear? The fabric will behave in the same way when you wear it.

Stretch the fabric. Check the amount of stretch. Check how quickly the fabric recovers its original shape.

Check the cut end of the fabric to see how much it ravels. Is the degree of ravel manageable? Can the ravel be dealt with by using special techniques? Is the grain correct? Can the fabric be straightened?

Look at the surface quality of the fabric. Look for uneven streaks and imperfections in the weave. If it's a print, look for misprints or prints that are off-grain.

Stand in front of a mirror and hold the fabric up to your face. Will the fabric color and texture flatter your skin tone and body type?

Smell the fabric. If chemicals to impart wrinkle resistant properties have not been washed out in the manufacturing process, you may detect a fishlike odor. Avoid any fabrics that have this unpleasant odor.

Characteristics of Natural Fibers

Fiber Name and Source	Good Characteristics	Poor Characteristics	Care
Protein Fibers			
Silk (cocoon of silkworm)	Available in wide variety of weights and textures Luxurious Strong Drapable, soft Absorbent Resists wrinkles Resists mildew	Damaged by perspiration, deodorants, perfumes, hairspray, bleach Weak when wet Sensitive to light May water spot	Dry cleaning is safest Some fabrics may be hand washed, however, color loss can occur Do not rub surface as damage to fibers can occur Iron wrong side, moderate temperature
Wool (sheep)	Does not build up static Strong, durable Resilient and elastic due to natural crimp Resists wrinkles May be felted Absorbent Dyes well Resistant to fading and perspiration Warm	Absorbs odors Not moth resistant Not washable unless treated Weaker when wet Undesirable felting can occur	Usually dry-cleaned May be machine washed if treated
Specialty Hair Fibers Mohair (Angora goat) Camel hair (camel) Cashmere (cashmere goat) Angora (Angora rabbit) Llama's hair (llama)	Warm Soft, luxurious Blend well with other fibers	Expensive Not as durable as wool Tend to show wear in areas of strain or frequent abrasion Sensitive to dry-cleaning chemicals	Dry-clean Inform dry cleaner of garment fiber content and areas that need spot treatment
Cellulosic Fibers			
Cotton (cotton plant)	Strong, durable Versatile Comfortable Absorbent Does not build up static	Mildews Does not spring back into shape Wrinkles easily without special finish Shrinks unless treated or preshrunk	Machine washable if colorfast May shrink if washed or dried at high temperatures Usually ironed at high temperatures
Linen (flax plant)	Cool, comfortable Absorbent Natural luster Withstands high temperatures Strong, durable Resilient Blends well with other fibers	Wrinkles easily Does not always dye well Shows wear in areas of abrasion Shrinks unless treated or preshrunk Mildews	May be machine washed and dried Bleach weakens fibers; can yellow fabric Check manufacturer's instructions due to shrinkage Can be dry-cleaned Iron at high temperature
Ramie (plant similar to flax)	Dyes well Absorbent High luster Blends well with other fibers Cool, comfortable to wear	Shrinks Wrinkles easily	Check manufacturer's instructions due to shrinkage variations

Characteristics of Manufactured Fibers

Generic Name and Trade Names	Good Characteristics	Poor Characteristics	Care
Cellulosic Fibers			
Acetate Celebrate! Chromspun Estron	Excellent drapability Dyes well Luxurious feel and appearance Shrink, moth, and mildew resistant	Poor resistance to abrasion Wrinkles easily Heat sensitive	Dry-clean for best results Can machine wash but wrinkles difficult to remove Iron at low temperature
Rayon Beau-Grip Durocol Fibro Galaxy Neptune Zantrel	Cool, comfortable Highly absorbent Good sheen Soft drapability Dyes well Versatile	Lacks strength May stretch or shrink Heat sensitive Poor resistance to soil and abrasion Supports mildew growth Wrinkles unless treated	Usually machine washable Retains appearance better if dry-cleaned Check care label Iron at low temperature
Noncellulosic Fibers			
Acrylic Acrilan Bi-Loft Creslan Fi-lana Orlon Remember	Soft, warm, wool-like Lightweight Resists wrinkles Resistant to sunlight, chemicals, oil Quick drying Retains shape	Surface tends to pill Builds up static electricity Does not absorb moisture	Machine washable and dryable Use fabric softener to reduce static
Modacrylic SEF	Quick drying Good wrinkle recovery and shape retention Abrasion resistant Flame retardant Soft Accepts dyes well	Heat sensitive Does not absorb moisture Tends to build up static electricity	Check care instructions Usually machine washable Remove oil stains immediately Use cool iron
Nylon Antron Cantrece Crepeset MicroSupplex Silky Touch Ultron Zefran	Exceptionally strong Abrasion resistant Crease resistant Soft, lustrous Retains commercially heat-set pleats Resists stretching and shrinking Accepts dyes well	Builds up static electricity Heat sensitive Does not absorb moisture May pill White fabric may gray or yellow	Machine washable Use fabric softener to reduce static Iron at low temperature
Olefin Alpha Condesa Elustra Herculon Marvess Polypropylene	Abrasion resistant Strong Durable Resists chemicals, stains, static, wrinkles Lightweight	Heat sensitive Poor dyeability Nonabsorbent	Check care instructions Usually machine washable and dryable

(Continued)

Generic Name and Trade Names	Good Characteristics	Poor Characteristics	Care
Polyester Compet Coolmax Dacron Diolen Fortrel Hollofil Micromattique Micronesse Trevira	Durable Resists wrinkling Versatile Retains commercially heat-set pleats Resists stretching, abrasion, shrinking Resists heat, bacteria, most chemicals Accepts dyes well	Builds up static electricity Does not absorb moisture Absorbs oil and grease readily May pill	Usually machine washable Use fabric softener to reduce static Remove oily stains immediately with solvent or detergent solution
Spandex Cleerspan Dorlastan Lycra	Elastic Strong Lightweight Soft Resists abrasion Resists perspiration and body oils	Heat sensitive Chlorine bleach will cause yellowing and loss of strength	Hand or machine wash Do not use chlorine bleach Iron at low temperatures

Characteristics of Fabrics

Construction Method	Typical Fabrics	General Characteristics
Plain weave	Batiste Broadcloth Chiffon Gingham Muslin Percale Poplin	Characteristics vary with tightness of weave Fairly strong and durable Easy to sew if weave is not too loose
Twill weave	Denim Gabardine Herringbone	Surface has diagonal design Very strong and durable Resists wrinkles Does not soil readily Tends to ravel Easy to sew if not too heavy
Satin weave	Sateen Satin	Smooth, sometimes shiny surface Surface snags easily Not very durable May be slippery and difficult to sew May show soil
Basket weave	Oxford Monk's cloth	Tends to ravel more than plain weaves Wrinkles less than plain weaves
Pile weave	Corduroy Velvet Velveteen Terry cloth	Surface color may vary when viewed from different directions Loop pile may catch and snag Cut pile may crush Requires special sewing and pressing techniques Strength and durability varies
Knit fabric	Double knit Jersey Knit terry cloth Rib knit Velour	Amount of stretch and recovery will vary Comfortable to wear due to stretchability Resists wrinkles fairly well Care must be taken to allow for stretch when sewing Some knits will run when torn; others may ravel

Name ______________________________

Date ____________________ Period __________

Activity 3-1: Interpreting the Information

As you select fabrics, you will need to interpret and draw conclusions about the information in this lesson. To do this, answer the following questions and be prepared to discuss them. You may work with another person on this activity.

1. What do you know about the following types of fibers?

natural fibers: ______________________________

protein fibers: ______________________________

manufactured fibers: ______________________________

cellulosic fibers: ______________________________

noncellulosic fibers: ______________________________

2. The fiber charts in this lesson include a number of words with which you may be unfamiliar. Use the reference materials provided by your teacher to find what the following words mean in terms of fiber characteristics. In the space at the top of the next page, list any other words from the charts with which you are unfamiliar. Look up their meanings, too.

abrasion resistant: ______________________________

resilient: ______________________________

absorbent: ______________________________

crease resistant: ______________________________

elastic: ______________________________

heat sensitive: ______________________________

lustrous: ______________________________

(Continued)

Name ______________________________

Date ____________________ Period ____________

other words with which you are unfamiliar: ______________________

3. What characteristics do you find that are unique to natural fibers?

What characteristics are unique to manufactured fibers?

4. How might identifying the basic characteristics of manufactured and natural fibers help you know what to expect from a specific fiber? ______________________

5. How do the fiber content and fabric construction determine what types of garments are made from a fabric? ______________________

6. Explain how the characteristics of a fabric determine the way you would care for the fabric while constructing a garment. Also explain how they affect the way you would launder the garment when it has been completed.

7. What similarities, if any, do you find between the care required for manufactured fibers and natural fibers? ______________________

8. How might finishes applied to fabrics change the characteristics of those fabrics?

Name ______________________________

Date ____________________ Period ____________

Activity 3-2: Determining Fabric Characteristics from Fiber Content

Below you will find a list of fabrics and the fiber content of each. Your task is to indicate the characteristics and care requirements that can be expected of each fabric. Use the fiber characteristic charts to help you with this activity. You will notice that some of the fabrics listed are fiber blends. Different fibers are often mixed together to make a fabric with more desirable characteristics. The type of fibers and the percentage of each fiber in the fabric give a clue about what can be expected from the fabric.

Fabric and Content	Expected Characteristics and Care Requirements
1. Calico print 100% Cotton	
2. Ripstop nylon 100% Nylon	
3. Corduroy 84% Polyester 16% Cotton	
4. Satin face crepe 87% Acetate 13% Nylon	
5. Velour 10% Polyester 90% Acetate	
6. Suit fabric with linen look 55% Polyester 45% Rayon	
7. Velvet 65% Cotton 35% Rayon	
8. Stretch solid 87% Nylon 13% Spandex	

Name ____________________________________

Date ______________________ Period _____________

Activity 3-3: Choosing the Best Fibers for Garments

Below is a list of garments. Your task is to select the fiber(s) and fabric(s) that you would consider using to construct each garment. Include reasons for your choice.

Garment	Fiber Choice	Fabric Choice	Reasons for Choice
1. Summer shirt			
2. Winter coat			
3. Swimsuit			
4. Child's play outfit			
5. Party dress			

Name ______________________________

Date ________________ Period __________

Activity 3-4: Evaluating Learning

Assess your understanding of this lesson by answering the questions below. Share your evaluation with your teacher.

1. Give several important differences between manufactured fibers and natural fibers regarding performance characteristics. ______________________________

2. Explain how knowing the fiber characteristics, method of fabric construction, and finishes applied will help you during garment construction. ______________________________

3. In your own words, give the meanings of the following words as they relate to fiber characteristics:

   drapability ______________________________

   hand ______________________________

   blend ______________________________

4. Explain in your own words why it is helpful to know fiber characteristics when selecting fabric for specific types of garments. ______________________________

5. Explain in your own words why it is helpful to know fabric construction characteristics when selecting fabric for specific types of garments.

6. What fiber characteristics would be most important when selecting fabrics for the following garments?

   tennis clothes ______________________________

   child's play clothes ______________________________

   school clothes ______________________________

Lesson 4 Fabric Preparation

Objectives

This lesson will help you to

- identify grainlines in various types of fabrics.
- state generalizations about cutting out pattern pieces on grain.
- determine whether fabric is on grain.
- identify when grainlines can be straightened.
- determine when fabric should be preshrunk.

Words to Know

grain
warp yarn
lengthwise grain
selvage
crosswise grain
weft
filling yarn
bias
rib
course
raw edge
preshrinking

Gathering Information

Fabric must be prepared before cutting out pattern pieces. This preparation may involve two procedures. First, the fabric may need to be straightened. Second, the fabric may need to be preshrunk. If the fabric requires these procedures and they are not done, your finished garment will not fit properly.

What Is Grain?

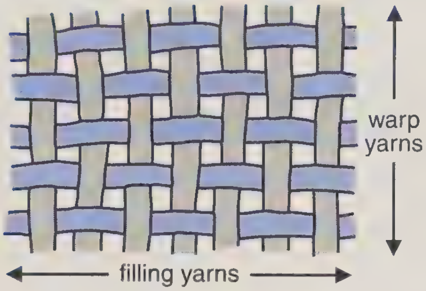
All woven and knitted fabrics and some nonwoven fabrics have direction, or ***grain***. The grain is determined by the position of the yarns and fibers in the fabric.

In woven fabrics, the grain must be made straight. Then pattern pieces must be cut out in the same direction as the grain if the garment is to hang properly.

(Continued)

Woven fabrics are constructed by interlacing yarns at right angles to each other. There are three grain directions.

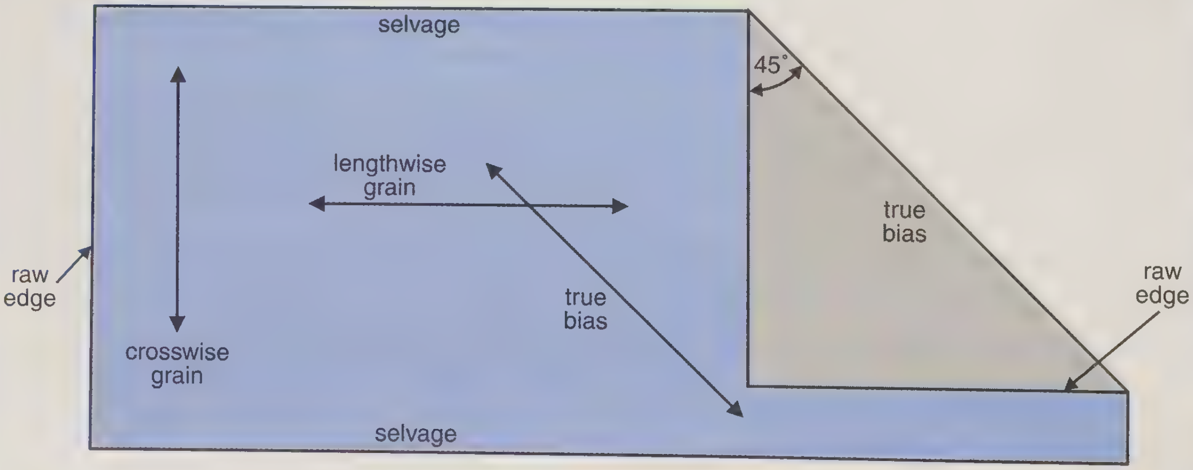
Lengthwise grain. The lengthwise yarns, called ***warp yarns***, form the ***lengthwise grain*** in woven fabric. This grain runs parallel to the selvage edges of the fabric. The ***selvage*** edges are the finished edges of the fabric as it comes off a loom.



The lengthwise yarns are stronger than the crosswise yarns. They are used to pull the fabric through the loom. Therefore, the lengthwise grain is generally placed on the body in a vertical direction. This direction receives the greatest strain from sitting, bending, and moving.

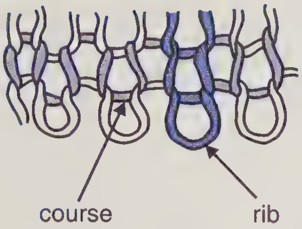
Crosswise grain. The ***crosswise grain*** is perpendicular to the lengthwise grain. It is formed by the crosswise yarns, which are also called ***weft*** or ***filling yarns***. The crosswise grain tends to be weaker than the lengthwise grain. Therefore, it is usually placed going around the body.

Bias. The ***bias*** runs diagonally across the fabric. True bias forms a 45 degree angle with the lengthwise and crosswise yarns of the fabric. The bias has a great deal of give. On woven fabrics, the bias may be used when a pattern piece requires stretch.



Grain in Knit Fabric

Knit fabrics are made with a series of interlocking loops. These loops give knits their built-in ability to stretch. They open out when subjected to stress and return to their original position when released. Grain in knit fabrics relates to the direction of the loops rather than to the direction of the yarns themselves.



Lengthwise grain. The lengthwise grain can be identified by ***ribs*** that run the length of a knit fabric. The lengthwise grain usually has less stretch than the crosswise grain.

Crosswise grain. The crosswise grain of knit fabrics is perpendicular to the ribs. It is identified by ***courses*** that run across the fabric.

The direction of greatest stretch, most often the crosswise direction, is usually placed around the body. The direction of the greatest stability, most often the lengthwise direction, is usually placed up and down the body.

Bias. Knit fabrics, like woven fabrics, have diagonal, or bias, stretch. The amount of stretch depends on the tightness of the knit and, therefore, varies from fabric to fabric. The bias stretch in knits tends to be unstable so pattern pieces are seldom cut in this direction.

Grain in Nonwoven Fabric

Nonwoven fabrics are produced by bonding, knotting, or interlocking fibers together by chemical or mechanical means.

There are three common types of nonwoven fabrics.

- Stable nonwovens have equal stability in all directions.
- Stretch nonwovens have stability in the lengthwise direction and stretch in the crosswise direction.
- All bias nonwovens have equal stretch in all directions.

The direction of greatest stability is generally placed vertically on the body.

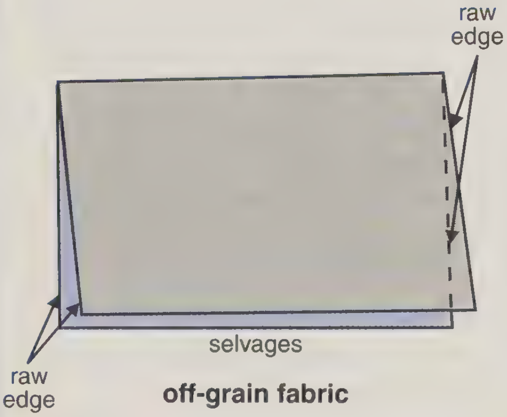
How to Check Straightness of Fabric Grain

Fabric is on-grain when the crosswise and lengthwise threads (or in the case of knits, the ribs and courses) are at right angles to each other. Fabric may become off-grain during the finishing process at the factory. If pattern pieces are cut from fabric that is off-grain, the garment may not hang evenly when worn.

To check straightness of fabric grain, you must first straighten the cut ends of the fabric. These ends are often called ***raw edges***. For woven fabrics, cut across an easily visible crosswise thread or a woven-in stripe. If crosswise threads are not easily visible, snip the selvage and lift a crosswise thread with a pin. Ease the gathers that form along the thread as you gently pull it. When you reach the other selvage, clip it and pull the thread out of the fabric. Cut along the space left by the pulled thread.

For jersey single knits, the ends may be straightened by cutting along a course or a knitted-in stripe. For other types of knits, deciding if the grain is straight may be difficult. You may use your eye to help you.

Once the raw edges have been straightened, fold the fabric lengthwise with the selvages even. If both edges match exactly and both layers of fabric lie smoothly, the fabric is on-grain. If the cut edges are not even and the corners do not match, the fabric is off-grain.



off-grain fabric

When May Fabric Grain Be Straightened?

If fabric is off-grain, it may be straightened when

- it is a woven or a jersey single knit fabric (Jersey single knits are discussed in Lesson 3, "Making Fabric Choices.")
- it has no finish
- it has a finish such as sizing that may be removed by laundering or dry cleaning
- it has a permanent finish, that does not affect the grain, such as a shrink resistant finish (Finishes are discussed in Lesson 3, Making Fabric Choices.")

(Continued)

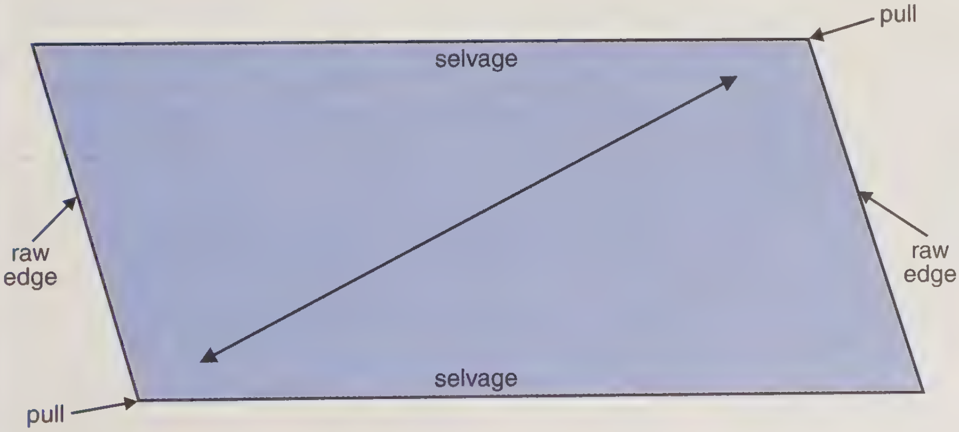
If fabric is off-grain, it may not be straightened when

- it contains thermoplastic (heat sensitive) fibers, such as polyester, acrylic, nylon, and acetate
- it is a double knit, an interlock knit, a tricot knit, or any knit other than a jersey single knit
- it is densely woven or heavily felted wool
- it has a permanent finish that affects the grain, such as crease resistance or stain resistance

During stabilization and finishing, fabrics containing thermoplastic fibers are subjected to heat, causing the fibers to become soft and pliable. If a fabric is pulled off-grain during this process, it cannot be made straight again. Sometimes a fabric is pulled off-grain after this process. This could happen, for instance, when it is being wound on a bolt. In this case, the grain may be improved.

How to Straighten Fabric Grain

You have seen that the straightened ends of off-grain fabric do not match when it is folded lengthwise. To straighten an off-grain fabric, open it up and pull on the short corners. You may wish to ask another person to help you do this. Then, fold the fabric again, placing the selvages together. Check to see if the grain has been changed. Repeat this process until the raw edges of the fabric are even and the corners match.



Not all fabrics can be straightened. If your fabric does not appear on-grain after several attempts, further effort may not bring success.

When to Preshrink Fabric

Many fabrics require ***preshrinking*** before cutting out a pattern. If this step is not taken, the finished garment will shrink when it is washed. This will result in a garment that is too small.

You may wish to prewash a fabric even if it won't shrink. Prewashing helps remove fabric finishes that could later make the needle sticky and cause the machine to skip stitches. This is especially true for knit fabrics.

Use the following guidelines to help you decide when preshrinking is necessary.

- Preshrink fabric unless the label states that less than one percent shrinkage will occur.
- Fabric labeled *wash and wear*, *crease-resistant*, or *stabilized finish* usually does not need to be preshrunk.
- Fabric made of 100 percent synthetic fibers usually needs no preshrinking. Fabric containing a high percentage of rayon is an exception to this rule, as rayon tends to shrink.
- If fabric has a high percentage of cotton, it should be washed several times. Cotton tends to have residual shrinkage.
- Preshrink all washable knits, as they often shrink due to relaxation of the knit.
- Wool knits can shrink even when they are dry-cleaned. Be sure to steam press or dry-clean them before cutting out a pattern.
- If in doubt about whether or not to preshrink a fabric, test it. Cut two small, identical squares. Wash one square and steam press it dry. Place the two squares together and compare size for shrinkage.

How to Preshrink Machine Washable Fabrics

Preshrink fabric by using the same method that will be used to launder the finished garment. If the fabric was knitted in a tube, preshrink the fabric before cutting open the tube. If the fabric will ravel, machine stitch along the raw edges using a zigzag stitch before preshrinking. (Machine stitching is discussed in Lesson 11, "Operating the Sewing Machine.") Be sure not to machine dry any fabric that is labeled *drip-dry*, *line dry*, or *dry flat*.

How to Preshrink Fabric That Must Be Hand Washed or Dry-Cleaned

This method straightens the grain while the fabric is drying.

Follow these steps:

1. Straighten the ends of the fabric.
2. Fold the fabric lengthwise, right sides together, matching selvages and straightened edges. (The fabric may not lie flat.)
3. Clip through the selvages every four inches. The selvages tend to shrink more and this relaxes the fabric.
4. Machine or hand baste the straightened ends together; then baste the selvages together.
5. Dampen the fabric. *For wool:* Spread the fabric on a damp sheet. Fold the sheet over the fabric. Use an additional sheet, if needed, to cover all the fabric. Fold the fabric and the sheet together in an accordion pleat style. Place folded fabric and sheet in a plastic bag and leave overnight to allow fabric to become thoroughly damp. *For other fabrics:* Fold the fabric carefully and place it in warm water for 30 minutes. Make sure the fabric is completely wet. Remove the fabric from the water. Press out excess water, being careful not to wring as this will wrinkle or even damage some fabric.
6. Lay the fabric on a flat surface that will not be damaged by moisture. (Do not let the fabric hang off the sides of the surface.) Smooth out the fabric so both ends are at right angles to the selvages.
7. When the top layer is dry, turn the fabric over. Allow the fabric to dry completely.

Dry-cleanable fabric may also be taken to a professional dry cleaner. Provide the dry cleaner with the following instructions:

- Steam pressing the fabric is usually done with wool, but is not advisable with silk and some specialty fibers. Your dry cleaner should be able to tell you whether or not this step is necessary.
- Avoid pressing along the lengthwise fold to prevent permanently setting the crease.
- Return the fabric folded, rather than draped over a hanger, to avoid stretching it.

Name ____________________

Date ____________ Period ________

Activity 4-1: Identifying Grainlines

Your teacher will provide you with fabric pieces. The grains on each fabric piece will be labeled with a letter and an arrow indicating the grain in question. Identify the grainlines in each fabric piece as lengthwise, crosswise, or bias. Write your answers in the spaces below. You may refer to the fabric grain information sheets.

Fabric #1 A. ____________________
B. ____________________
C. ____________________

Fabric #2 A. ____________________
B. ____________________
C. ____________________

Fabric #3 A. ____________________
B. ____________________
C. ____________________

Fabric #4 A. ____________________
B. ____________________
C. ____________________

Fabric #5 A ____________________
B. ____________________
C. ____________________

Answer the questions below in your own words.

1. Why should fabric grain be straightened before pattern pieces are cut out?

____

____

____

2. When using knit fabrics, which grain goes around the body? Why?

____

____

____

3. Explain why grainline arrows usually run from top to bottom on pattern pieces. Also explain why pattern directions say, “Place grainline arrow on the lengthwise grain.”

____

____

____

Name ______________________________

Date ____________________ Period ____________

Activity 4-2: Determining if Fabric Is On-Grain

You will be given various fabric pieces. Determine if each piece is on-grain or off-grain. Then decide whether the off-grain fabric pieces may be straightened. You may refer to the information sheets on straightening grainlines.

	Indicate if the fabric is on-grain or off-grain. Explain your answer.	Give your reason for thinking this fabric may be straightened.
Fabric #1		
Fabric #2		
Fabric #3		
Fabric #4		
Fabric #5		

Name ______________________________

Date ____________________ Period ____________

Activity 4-3: Determining When Fabric Should Be Preshrunk

Your teacher will provide you with five fabric pieces and important information about each piece. Using this information and the information in this lesson, decide whether the fabric needs to be preshrunk. If the fabric is to be preshrunk, decide which of the following methods to use:

- machine wash
- fold in a damp sheet and lay flat to dry
- place in a warm water bath and lay flat to dry
- dry clean

If the fabric is to be machine washed, indicate if the raw edges need to be zigzagged to prevent raveling. Also indicate whether or not the fabric is to be machine dried.

	Indicate whether the fabric is to be preshrunk and the reason for your decision.	Preshrinking method to be used.
Fabric #1 Fiber content- Knit or Woven- Finishes-		
Fabric #2 Fiber content- Knit or Woven- Finishes-		
Fabric #3 Fiber content- Knit or Woven- Finishes-		
Fabric #4 Fiber content- Knit or Woven- Finishes-		
Fabric #5 Fiber content- Knit or Woven- Finishes-		

Name ______________________________

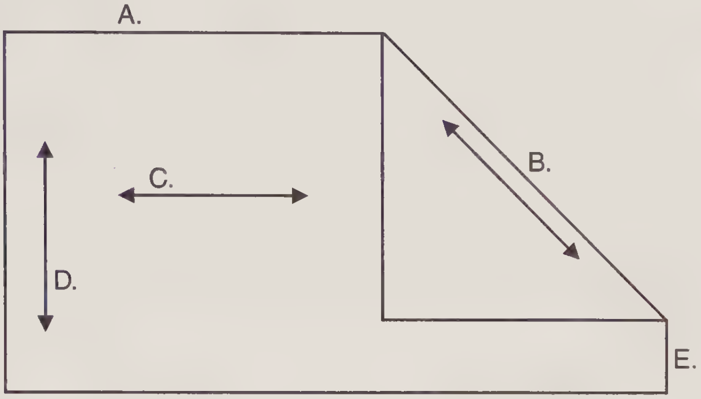
Date ____________________ Period ____________

Activity 4-4: Evaluating Learning

Check your understanding of fabric preparation by answering the questions that follow. Do your own work.

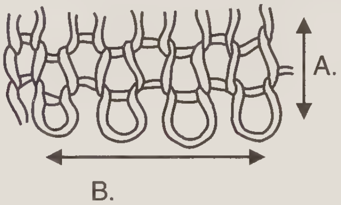
1. Place the corresponding letter from the diagram in the blank before each of the following terms:

____ raw edge
____ selvage
____ lengthwise grain
____ crosswise grain
____ true bias



2. Place the corresponding letter from the diagram in the blank before each of the following terms:

____ rib (lengthwise grain)
____ course (crosswise grain)



3. What unique characteristic do pattern pieces cut on the bias have?

____

4. In woven fabrics, the strongest yarns are used in the direction of the __________ grain. This grain is usually placed in a __________ direction on the body because it receives the greatest strain.

5. Knit fabrics are cut so that the __________ (course, rib) goes around the body because it has the greatest degree of stretch.

6. Explain what happens if pattern pieces are cut from fabric that is off-grain.

____

____

____

____

(Continued)

Name ______________________

7. Explain, in your own words, how to determine if fabric is on-grain or off-grain.

8. If fabric is off-grain, can it always be straightened? ______________
Explain your answer. ______________________

9. Removing the finish on washable fabrics by laundering helps to avoid __________
__________ .

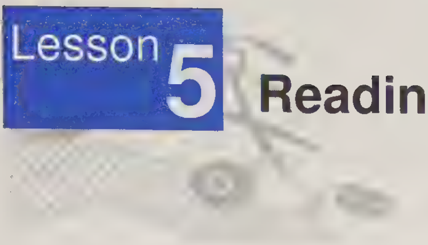
10. What synthetic fiber should be preshrunk? ______________

11. Preshrinking dry-cleanable fabrics also helps to ______________ .

12. Explain how to straighten off-grain fabrics.

13. Explain how to preshrink a washable fabric.

14. What is one instruction you should give a dry cleaner when you are having a dry-cleanable fabric preshrunk?



Lesson 5

Reading the Instruction Sheet

Objectives

This lesson will help you to

- identify the types of information found on the patten instruction sheet.
- analyze and interpret the construction diagrams used on the instruction sheet.
- analyze and interpret the written directions given on the instruction sheet.

Word to Know

instruction sheet

Gathering Information

The pattern instruction sheet will tell you how to cut out and construct your garment. By following the instructions carefully, you will be able to make your garment quickly and easily. The diagrams and written instructions will be a valuable source of information. However, reading the instructions and diagrams is not always easy. This lesson will give you practice interpreting the information on the instruction sheet.

Instruction Sheet Information

There are many types of information provided on the pattern ***instruction sheet***. You should be familiar with each type and where it is located. Following is a list of the types of information. Not all types of information will appear on every pattern instruction sheet.

- front and back view of each garment
- pattern pieces required for each view
- explanation of the various markings on your pattern pieces
- instructions for preparing your pattern and fabric
- basic construction and pressing techniques
- layout key showing fabric and printed and unprinted sides of pattern

(Continued)

- layout directions for each view (The layout diagrams show how to position the fabric and place the pattern pieces on the fabric. Layout diagrams are given for each view, pattern size, and fabric width.)
- lengthening adjustments and fitting suggestions
- layout directions for lining and interfacing fabrics
- definitions of special sewing terms that are used in the instructions
- suggested ways to transfer markings from the pattern pieces to the fabric
- fabric key indicating right and wrong sides of fabric, interfacing fabric, and lining fabric
- sewing directions and diagrams explaining how to construct each detail of the garment

Garment Construction Steps

After cutting out your garment as illustrated in the layout diagrams, you are ready to sew your garment together. Read through all the steps pertaining to your garment before doing any sewing. This will give you an overall idea of the steps required to complete your project.

Diagrams and written instructions are given for each pattern view. You do not need to read the information that does not pertain to the view you are making. Scan the instructions until you reach a heading indicating your garment view. Begin at that point and complete each step given in the instructions. Occasionally the instruction sheet will refer you to another view and tell you to complete a certain number of steps. After completing those steps, return to your previous location in the instructions. Then continue working through the steps given.

Activity 5-1: Locating Types of Information

For this activity, you will need a pattern instruction sheet. You may use the instruction sheet for a pattern you will be constructing or one provided by your teacher. On your pattern instruction sheet, locate each of the types of information listed in the "Instruction Sheet Information" box. Remember, not all types of information can be found on every instruction sheet.

Activity 5-2: Using Instruction Diagrams and Written Information

The diagrams on the instruction sheet provide a fast and easy way to know what construction steps must be completed. The written instructions describe the diagrams and give additional information about the construction procedures. Understanding the diagrams and written information is very important if you are to complete your sewing project successfully.

In this activity, you will identify how specific sewing procedures are illustrated and described on the pattern instruction sheet. This activity will provide helpful information so that you will be able to complete Activities 5-3 and 5-4.

Using the pattern instruction sheet from the previous activity, identify how each of the items and procedures listed below is represented in the diagram and written instructions. Look over your instruction sheet until you find a diagram that illustrates each item or procedure. Examine the diagram closely. Then read the instructions beside the diagram so you will have an idea how the item or procedure is described. Remember, not all items and procedures will be on every instruction sheet. Find as many as you can. Your teacher may have you work with another individual on this activity.

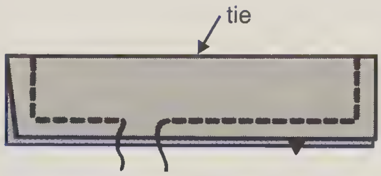
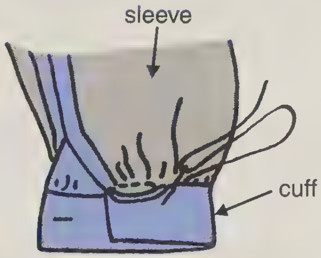
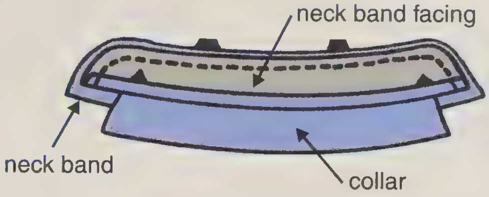
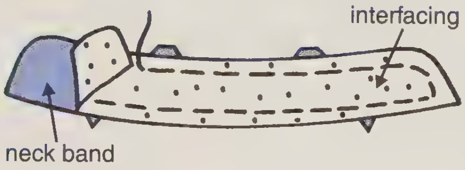
basting
buttonholes
clean finished edge
clipping
darts
ease stitching
hand stitching
hem
interfacing
reinforcement stitching
right and wrong sides of fabric
seam
staystitching
topstitching
trimming
tuck
two layers of fabric

Name ______________________________

Date ____________________ Period ____________

Activity 5-3: Interpreting Diagrams

Given the following diagrams, write a brief description of what the diagram is showing you to do. You may refer to a pattern instruction sheet if it is helpful to you.

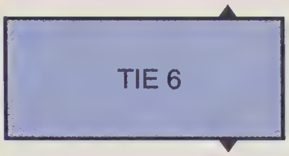
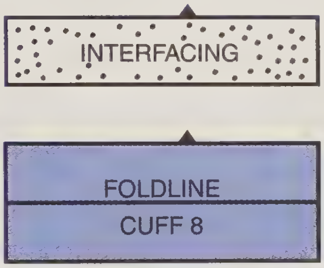
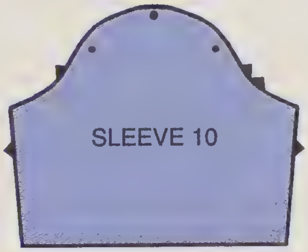
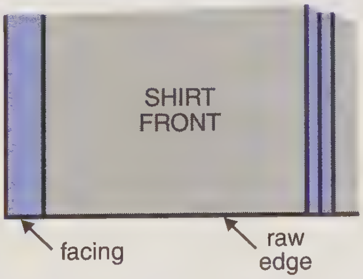
Diagram 1  	**Written Instructions:**
Diagram 2  sleeve cuff	**Written Instructions:**
Diagram 3  neck band facing neck band collar	**Written Instructions:**
Diagram 4  interfacing neck band	**Written Instructions:**

Name ______________________________

Date ____________________ Period ____________

Activity 5-4: Interpreting Written Instructions

Given the following written instructions, try to sketch a diagram that illustrates what you need to do. Do not worry about how well you are able to draw. Do the best you can.

Diagram	Piece(s)	Written Instructions
		Fold the TIE (6) in half lengthwise, RIGHT SIDES TOGETHER. Stitch, leaving end nearest notch open. Cut corners diagonally.
		Position interfacing on notched half of CUFF (8). Machine baste in place on ends and notched side. Hand stitch along foldline. Press under ⅝" on long UNNOTCHED edge of CUFF (8).
		To gather and ease cap of SLEEVE (10), machine baste ¾" and ½" from raw edge between notches.
		Finish the lower edge of the shirt with narrow hem. Press under raw edge ¼" and then press under again ¼".

Name ______________________________

Date ________________ Period __________

Activity 5-5: Evaluating Learning

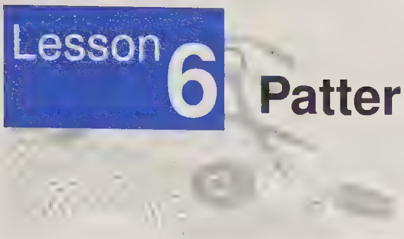
Assess your understanding of the lesson by indicating how you feel about the statements below. Circle your response. Share your evaluation and activity sheets with your teacher.

1. Do you feel that you know where to find the information you need on the instruction sheet?	Yes	No	Uncertain
2. Do you know where to begin reading the instruction sheet in order to construct the pattern view you will be making?	Yes	No	Uncertain
3. Do you feel that you can analyze and interpret what the diagrams are showing?	Yes	No	Uncertain
4. Do you feel that you can read and interpret the written instructions for each diagram?	Yes	No	Uncertain

(Note additional comments here.) ______________________________

Lesson 6

Pattern Symbols



Objectives

This lesson will help you to

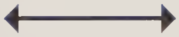
- identify the meanings of various pattern symbols.
- demonstrate an understanding of pattern symbols by sketching symbols in the appropriate locations on several pattern pieces.
- show how pattern symbols are used to match garment pieces for stitching.

Gathering Information

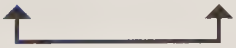
Pattern symbols provide a great deal of sewing information. Some of the symbols will tell you how to adjust your pattern to make it fit. Others tell you how to lay your pattern on the fabric. Still other symbols will tell you how to construct details and sew the pieces together. Because pattern symbols give so much information, understanding what they mean is an important part of learning to sew.

The appearance of some pattern symbols varies somewhat from one pattern company to the next. Looking at your pattern pieces and reading your instruction sheet carefully will help you identify the symbols used on your pattern. The following list includes a general description of many common pattern symbols.

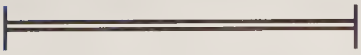
What Do Pattern Symbols Mean?



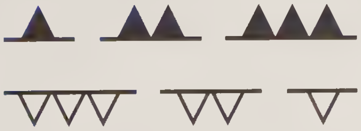
Straight of grain. When placing pattern piece on fabric, make both ends of the arrow an equal distance from selvage.



Place on fold. Place pattern piece so that the edge with the arrow is on the fold of the fabric.

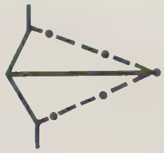


Lengthening or shortening lines. Cut apart or fold between lines to lengthen or shorten.

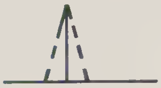


Notches. Use to match seams. Single, double, and triple notches are found in a variety of places on pattern pieces. Single notches are always used to indicate the front of a sleeve and the armhole on the pattern front. Double notches are always used to indicate the back of a sleeve and the armhole on the pattern back. By matching the notches you will always be able to tell which sleeve goes in which armhole.

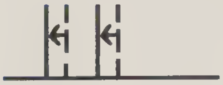
(Continued)



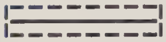
Dart placement. Transfer to fabric. Fold along solid line and stitch along broken line, using dots to match.



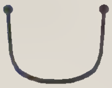
Sleeve placket placement. Transfer to fabric. Cut along solid line. Sew continuous lap to opening along dotted lines.



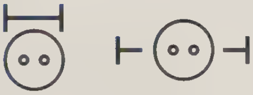
Pleat lines. Transfer to fabric. Bring lines together in the direction indicated by the arrows. Baste in place along seamlines.



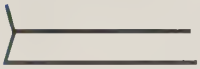
Welt pocket placement. Transfer to fabric. Cut along solid line. Sew welt to fabric at broken lines.



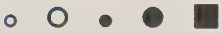
Patch pocket placement. Transfer to fabric. Match pocket piece to solid line.



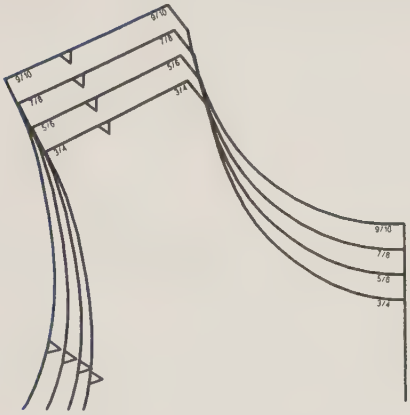
Button and buttonhole placement (may be used together or separately). Transfer to fabric to mark placement of button and buttonhole.



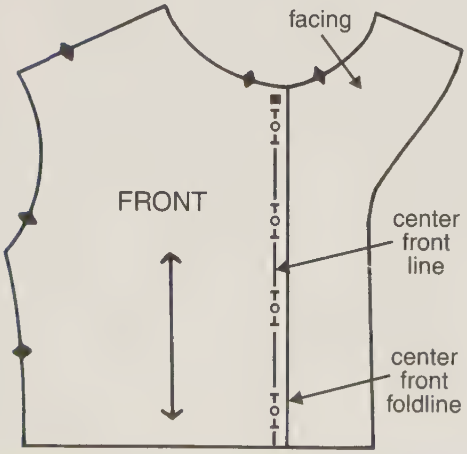
Hemline. Fold along inner solid line and hem.



Dots and squares. Transfer to fabric for use in matching pattern pieces. Small dots appear at numerous places on pattern pieces. A large dot is commonly used at the sleeve cap and on the front and back armholes at the shoulder seam. Matching these dots will ensure proper fit and the right amount of fullness throughout the sleeve. Squares are commonly found at the top of the center front line.



Cutting line (solid or broken) and stitching line (dashes). Most patterns only show cutting lines, but single-size patterns show both. The stitching line, whether shown or not, is always ⅝ inch away from the cutting line, unless stated otherwise on the pattern and in the directions.



Center front line and center front foldline. Use broken line to align the center fronts of the pattern pieces. Use solid line as a guide for folding back the facing portion of a pattern piece.

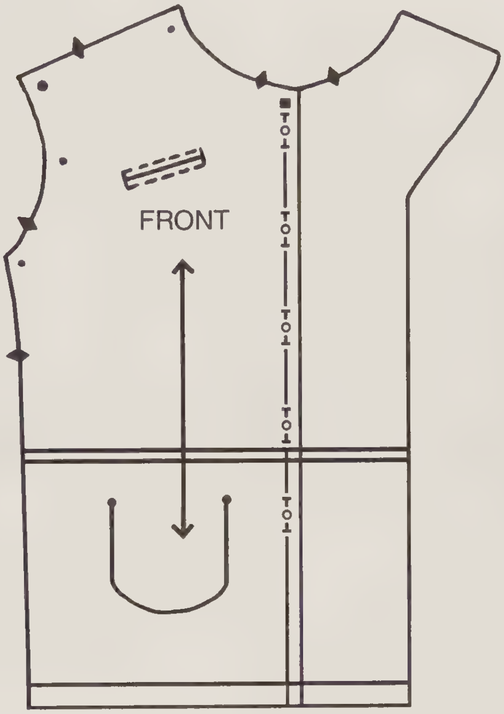
Name ______________________________

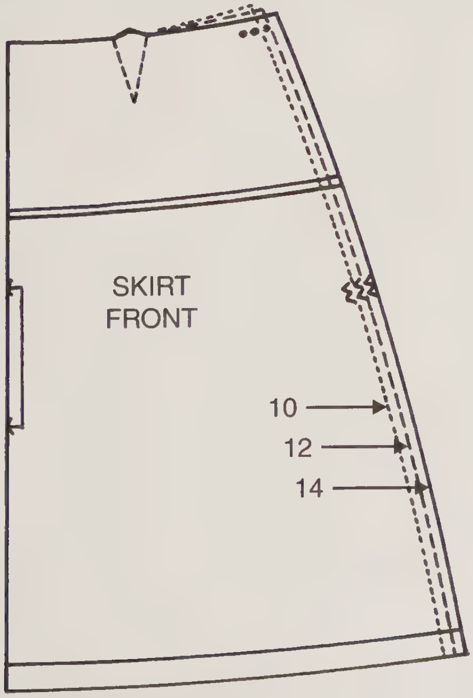
Date ____________________ Period ____________

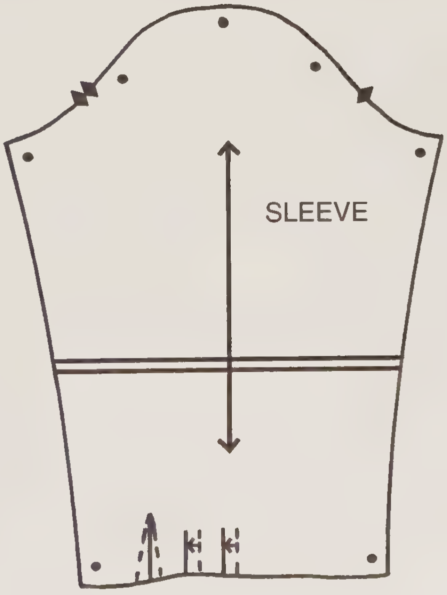
Activity 6-1: Identifying Symbols

Match the following symbol names to the symbols used on the pattern pieces. Place the number of the name near the symbol on the pattern. Draw lines between the numbers and the symbols if it makes your labels more clear. You will use some numbers more than once.

1. button and buttonhole placement
2. cutting line
3. stitching line
4. sleeve placket placement
5. patch pocket placement
6. small dot for matching
7. large dot for matching
8. square for matching
9. double notch for matching
10. single notch for matching
11. pleat lines
12. straight of grain
13. hemline
14. welt pocket placement
15. dart placement
16. place on fold
17. lengthening or shortening lines
18. center front line
19. center front foldline





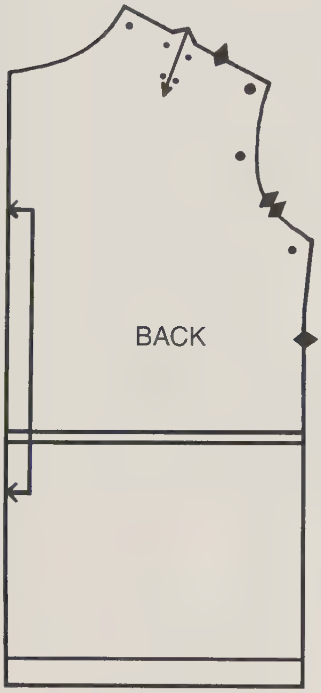


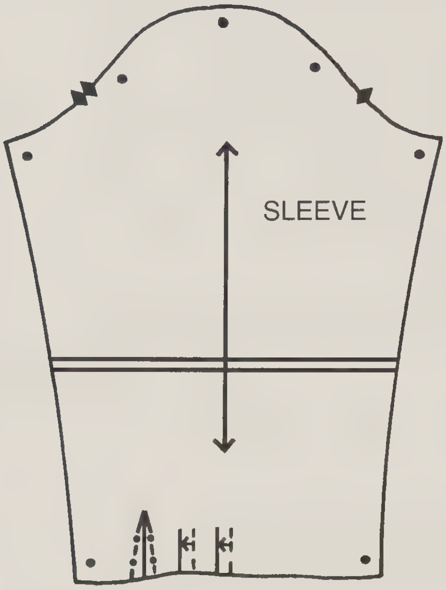
Name ______________________________

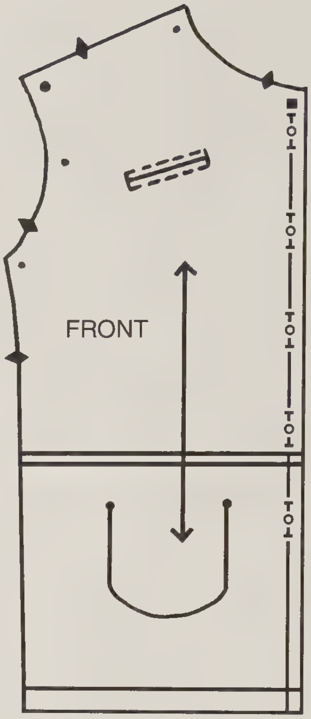
Date ________________ Period __________

Activity 6-2: Using Symbols to Match Pattern Pieces

When pattern pieces are connected, matching symbols are used to assure that pieces are joined in the right way. Draw lines connecting the symbols that need to be matched on the three pieces below. Then answer the questions that follow.







1. How can you tell the difference between the front and back of a sleeve?

____

____

2. How can you tell which sleeve goes into which armhole?

____

____

3. What marking is commonly used at the sleeve cap and with what is it matched?

____

____

Name ______________________________

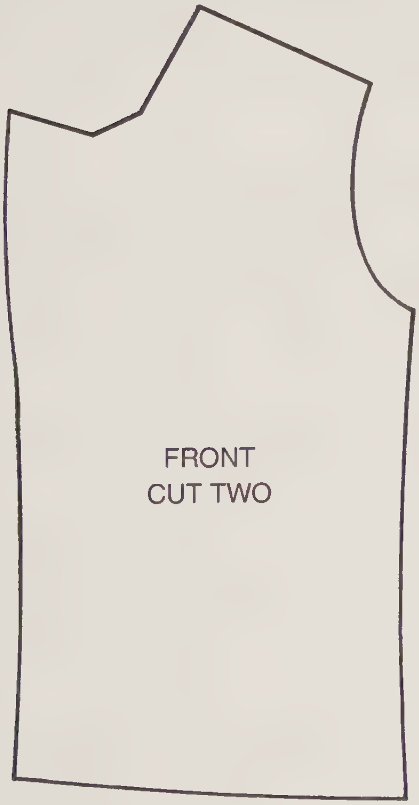
Date ________________ Period __________

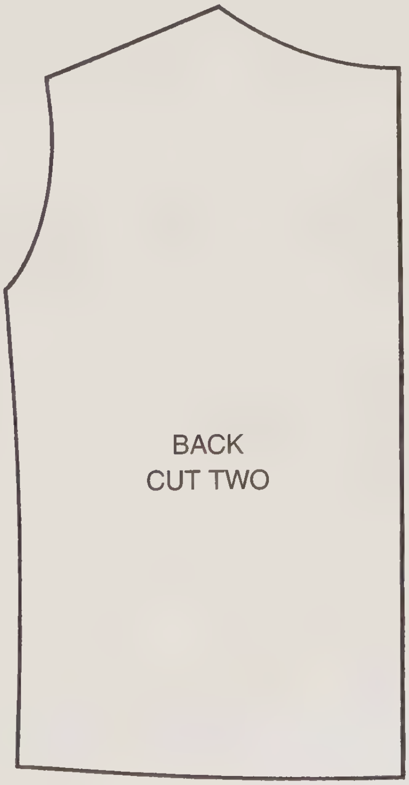
Activity 6-3: Drawing Symbols

Below are the outlines of a jacket front and back. Also, there is a list of symbols required for these pattern pieces. Sketch the symbols on the single-size pattern pieces in their proper location.

Where would the following symbols be located?

One buttonhole and button located at the waist
One welt pocket located on the upper jacket front
One large patch pocket on the lower front
A small dart at the neckline on the back
Shortening or lengthening lines
Stitching lines
Straight of grain arrows on front
Place on fold arrows on back
Hemlines
Single notches indicating shoulder matching and front sleeve matching
Double notches indicating side seam matching and back sleeve matching





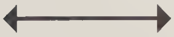
Name ______________________________

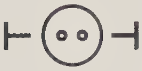
Date ____________________ Period __________

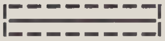
Activity 6-4: Evaluating Learning

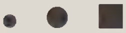
Assess your understanding of pattern symbols by answering the following questions.

1. Identify the following pattern symbols.

A.  ______________________________

B.  ______________________________

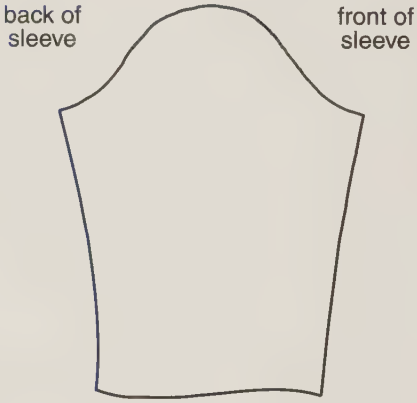
C.  ______________________________

D.  ______________________________

2. Draw sketches of the following pattern symbols:

A. Place on fold	
B. Dart placement	
C. Pleat lines	
D. Patch pocket	
E. Single notch	

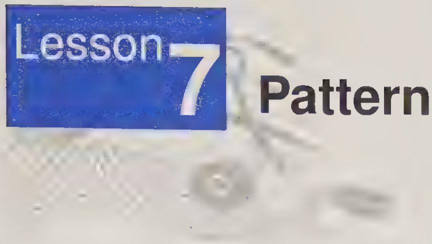
3. On a sleeve pattern, where would you expect to find the following symbols: large dot, small dots, single notches, double notches, sleeve placket placement, pleat lines? Sketch the pattern symbols in the correct location.



4. Explain briefly how pattern symbols are used to determine which garment pieces fit together.

____

____



Lesson 7

Pattern Adjustments

Objectives

This lesson will help you to

- determine when to make pattern adjustments by comparing your measurements with those of the pattern.
- make a variety of pattern adjustments.

Word to Know

ease

Gathering Information

A perfect-fitting garment should be the goal of everyone who sews. There is little point in making a garment that is uncomfortable or unattractive to wear. Perfect fit can best be achieved by taking a little extra time to compare your measurements with those of the pattern. This will allow you to make simple adjustments before cutting garment pieces from fabric. It will also prevent time-consuming alterations later.

Pattern Design and Fit

Buying the same pattern size for each garment you construct will not always guarantee a perfect fit. Every new pattern will fit a little differently.

Two clues may be found on the pattern envelope to give you an idea of how the pattern will fit. First, the back view illustration will show the silhouette of the garment. This will help you see how the garment may be expected to fall on the body.

Second, the garment description design will give clues about the fit. You will find such words as *loose fitting*, *fitted*, *semifitted*, and *close fitting*.

How Much Ease?

The word ***ease*** refers to the amount of extra fabric allowed in a garment to make the garment comfortable to wear. In other words, extra room is needed to allow for body movement. This wearing ease should never be removed in making adjustments in the pattern.

Minimum ease allowances:

Chest or Bust	3 to 4 inches
Waist	½ inch
Hips	1 inch for a snug fit 2 inches for a roomy fit
Back waist length	½ inch
Crotch depth	½ inch for 35-inch hips ¾ inch for 35-inch to 38-inch hips 1 inch for 38-inch-plus hips

The ease allowances given above are not suitable for stretch knit fabrics. Less ease is provided in stretch knit patterns.

Determining Pattern Measurements

Different garment designs allow varying amounts of wearing ease. This fact makes it difficult to determine the actual size of a finished garment and whether it will fit. To solve this problem, some patterns include finished garment measurements on the envelope and pattern tissue for such areas as around the hips and bust as well as leg width and length. These measurements exclude the yardage used for seam allowances, darts, pleats, and tucks in a finished garment.

If the pattern envelope does not provide finished garment measurements, the pattern may be measured. The most important areas of the pattern to measure are the crotch depth, hem and sleeve length, shoulder width, and circumference of upper arms, bust, hips, thighs, and hem edge. To measure the pattern, simply lay the pattern pieces flat, pin in any darts or tucks, and measure from seamline to seamline for those areas in question.

Determining When to Adjust the Pattern

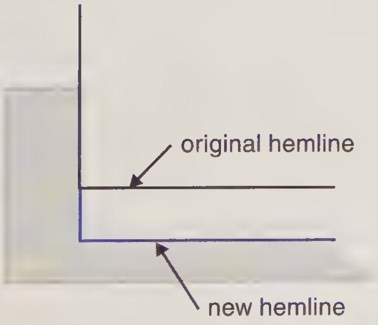
Take your body measurements and compare them with those on the back of the pattern envelope. The measurements given on the envelope include an allowance for ease. If some measurements differ, you will want to make adjustments in those areas.

You may also use the finished garment measurements to help you determine whether to adjust the pattern. Take your body measurements, and add the minimum ease allowances shown in the "How Much Ease?" box. If you like a loose fit, you may want to add more than the minimum amount of ease. Then compare your measurements with the finished garment measurements written on the pattern envelope or tissue. (See the "Determining Pattern Measurements" box for calculating finished garment measurements yourself.) Make adjustments in the pattern as necessary.

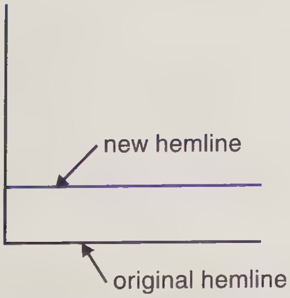
Adjusting Pattern Length

The most common pattern adjustment is for length. You should make length adjustments before other types of adjustments. Length adjustments are made above the waist as well as below the waist. Use the back waist length measurement to determine the amount of adjustment needed above the waist. Measure from the waist to the hemline to determine the length adjustment needed below the waist.

Length adjustments are made at the bottom cutting edge of the pattern or at parallel adjustment lines on the pattern. When adjusting length, be sure to shorten or lengthen all corresponding pieces the same amount. For instance, if you lengthen the front pant leg one inch, lengthen the back pant leg one inch as well.

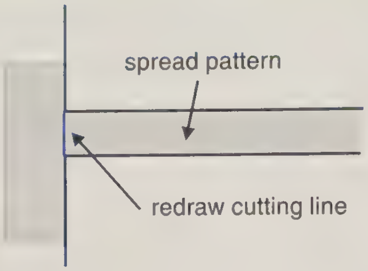


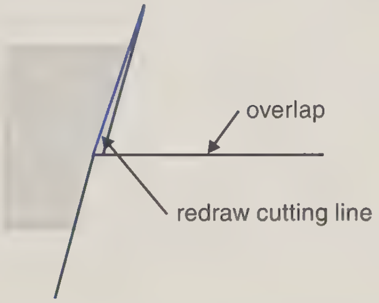
Lengthening the pattern at the hemline. Tape a piece of paper at the bottom of the pattern piece. Measure the desired amount from the original hemline. Draw a new hemline parallel to the original line. Draw new cutting and stitching lines at each side.



Shortening the pattern at the hemline. Measure the desired amount up from the original hemline. Draw a new hemline parallel to the original line.

(Continued)





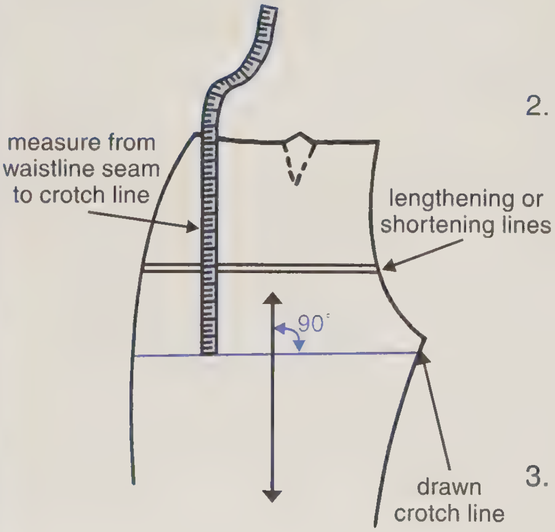
Lengthening the pattern using the adjustment lines. Cut between the lengthening or shortening lines on the pattern piece. Place tissue paper under the pattern. Measure between the lines to spread the pattern the needed amount and tape it to the paper. Redraw cutting and stitching lines at each side.

Shortening the pattern using the adjustment lines. Measure up from the lower lengthening or shortening line the amount to be shortened. Draw a new line. Place tissue paper under the pattern. Fold the pattern, bringing the lower adjustment line to the newly drawn line. Tape the pattern in place. Redraw cutting and stitching lines at each side.

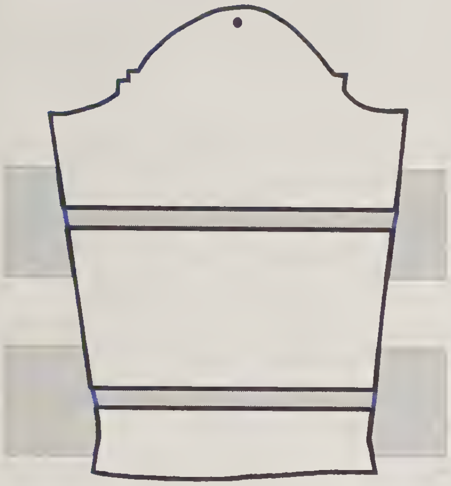
Adjusting Crotch Depth

Crotch depth is one garment area in which you may need to make length adjustments. The following steps will help you adjust pattern crotch depth:

1. If your pattern does not already have one, draw in a crotch line, beginning ⅝ inch below the crotch point. Be sure the line you draw forms a right angle with the grainline arrow.
2. To determine how much to adjust the crotch depth, measure from the drawn line to the waist. Do not include the seam allowance in this measurement. Take this measurement on the hip side of the pattern. Compare this measurement to your crotch depth measurement plus ease. The difference in the two measurements will be the amount you will need to lengthen or shorten the pattern piece.
3. Lengthen or shorten the pattern as described in the "Adjusting Pattern Length" section above using the parallel adjustment lines. Be sure to make the same changes on both the front and back pattern pieces.


measure from waistline seam to crotch line
lengthening or shortening lines
90°
drawn crotch line

Adjusting Sleeve Length



Sleeves frequently must be adjusted in length. Sometimes you can simply lengthen or shorten the sleeve at one location. However, occasionally the sleeve must be adjusted both above and below the elbow. The following steps will help you make this type of adjustment:

1. To determine the needed adjustment, measure your arm from the shoulder bone to the elbow. Then measure from the elbow to the wrist. Compare these measurements with the measurements of your pattern.
2. Use the parallel adjustment lines both above and below the elbow to make the necessary adjustments. Follow the directions in the "Adjusting Pattern Length" section for spreading or folding the pattern. Redraw the cutting and stitching lines.

Adjusting Pattern Width

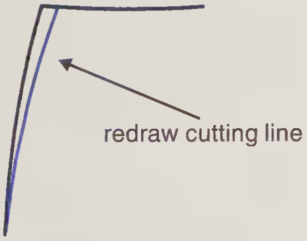
Adjustments in width are often necessary at the waist, chest, hips, and thighs. Compare your measurements to those of the pattern to determine the amount of adjustment necessary.

Once you know the total adjustment needed, you must calculate the amount to add to each side of the garment. You will be making width adjustments on both the front and back pattern pieces. You will cut each pattern piece from two layers of fabric. Therefore, divide the total adjustment by four. For instance, suppose you are going to increase the waist measurement a total of 1 inch. You would add ¼ inch to the front pattern piece and ¼ inch to the back pattern piece.

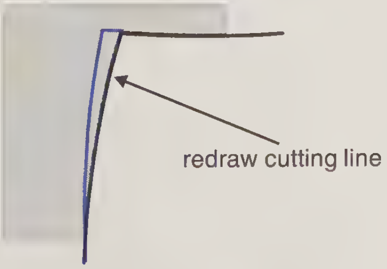
As you make your pattern width adjustments, be sure to make the same changes on corresponding pattern pieces. For instance, if you are increasing the pattern waist, you must also increase the waistband pattern piece.

There are two basic methods for adjusting the width of pattern pieces. The method used depends on the amount of adjustment needed.

Making minor width adjustments. If the adjustment is less that ½ inch, you can make it by adding or subtracting from a seam. Begin by taping a piece of tissue paper under the pattern.



minor decrease in width



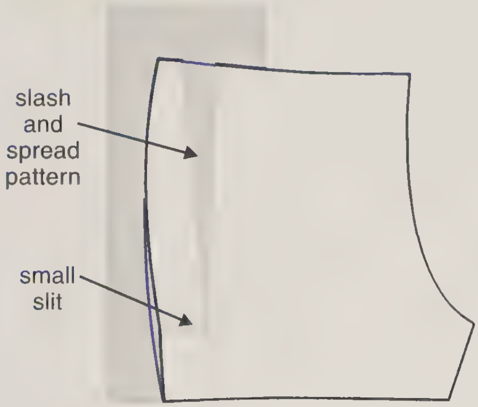
minor increase in width

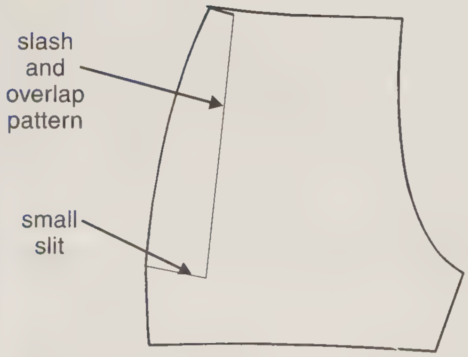
(Continued)

You will not need to do this if you are reducing the pattern. At the point where you need to reduce or increase your pattern piece, measure that distance from the stitching line. Draw a new stitching line. Be sure to make a gradual curve from the point of increase or reduction to the original stitching line.

Making major width adjustments. If the adjustment is greater than ½ inch, the adjustment is best made by slashing and spreading or folding the pattern. However, you should avoid making any adjustments over 2 inches. For adjustments greater than 2 inches, consider buying a larger size pattern. The following sections describe how to make major adjustments using the slash method.

Making a Major Waist Adjustment



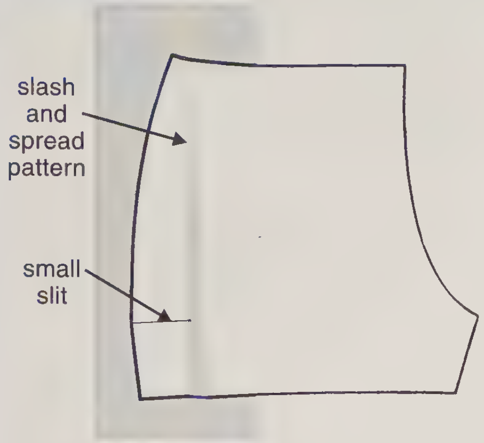


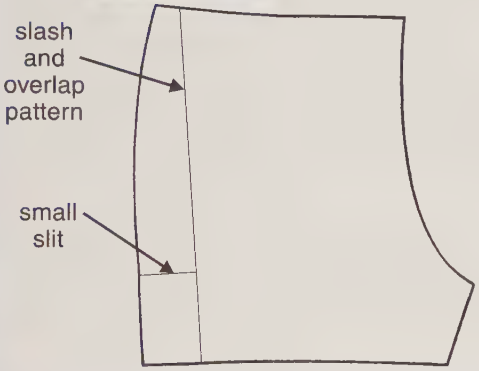
The following steps will help you increase the waist measurement of a pattern:

1. Begin by determining how much you will increase the pattern waist. You will need to add one-fourth of the total alteration near each side seam. You will make the same adjustment on the front and back pattern pieces.
2. Slit the pattern piece from the waist to the hipline close to the side seam. To make the pattern tissue lie flat, you may need to make a small horizontal slit. Cut from the end of the vertical slit to, but not through, the side cutting line. Pivot the pattern at the side edge to spread the pattern the desired amount at the waist. Place tissue paper under the slit and tape in place.
3. Draw new seamlines and cutting lines.
4. Adjust the waistband or facings to fit the new waist measurement.

To decrease the pattern waist measurement, you will need to vary the procedure given above. In step 2, overlap the cut edges of the slit pattern the necessary amount. Tape in place.

Making a Major Hip Adjustment



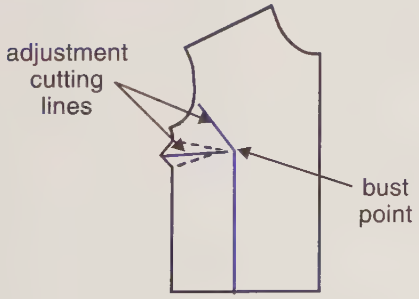


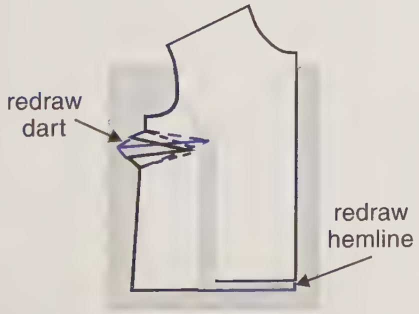
The following steps will help you increase the hip measurement of a pattern:

1. Begin by determining how much you will increase the hip. Remember, you will add one-fourth the total adjustment near each side seam.
2. Slash the pattern from the hemline to the waist. Do not cut through the waist seam allowance.
3. Place tissue paper under the pattern piece. Spread the pattern the desired amount at the hipline. Making this adjustment will cause the pattern to become much wider at the hemline. To prevent this and to make the pattern tissue lie flat, make a small horizontal slit in the pattern. Cut to, but not through, the side cutting line at the hipline. Pivot the pattern at the side edge to create the desired hem width. Tape the pattern in place on the tissue paper.

To decrease the pattern hip measurement, you will need to modify the procedure given above. In step 3, overlap the cut edges of the pattern the needed amount. Tape in place.

Making a Major Bust Adjustment





Women's patterns are designed for an average cup size. Therefore, increasing the bust area is necessary for many women. To determine when to make this adjustment, hold the bodice front pattern piece up to your body. Center the side seamline along your side. If the pattern center front does not reach your center front, use the following steps to increase the pattern:

1. Position the front bodice pattern piece on your body as described above. Measure the distance from the pattern center front to your center front. This is the amount of increase you will need to make in the pattern.
2. As shown by the blue lines at left, cut from the waistline to the bust point. Continue cutting to, but not through, the edge of the armhole.
3. Cut through the center of the dart to, but not through, the bust point.
4. Place tissue under the pattern piece. Spread the pattern as shown, making the increase equal to the measurement taken in step 1. Tape the pattern to the tissue to hold it in position. Redraw the hemline and dart as shown.

Fitting After the Pattern Has Been Cut Out

You should make major adjustments in the pattern before cutting it out. However, you will not always be able to foresee fitting problems at this early stage. For instance, all fabrics fit and hang differently. Therefore, even if you used the pattern before and achieved a perfect fit, another fabric may give a different fit.

Fitting garments early in the construction process makes adjusting the garment easier. Do not wait until you have finished the garment before trying it on. The longer you wait, the more difficult the adjustments will be to complete.

As you try on a garment, the fabric may fold, wrinkle, or pull over some of your body curves. This is a sign of poor fit. The folds indicate the area of the garment that needs alteration. For instance, when trying on a skirt, folds may form between the hip and the waist. This is a sign that you need more fullness in the hip area.

There are many alteration books available. You can use them to work out procedures that will solve your personal fitting problems.

Activity 7-1: Practicing Pattern Adjustments

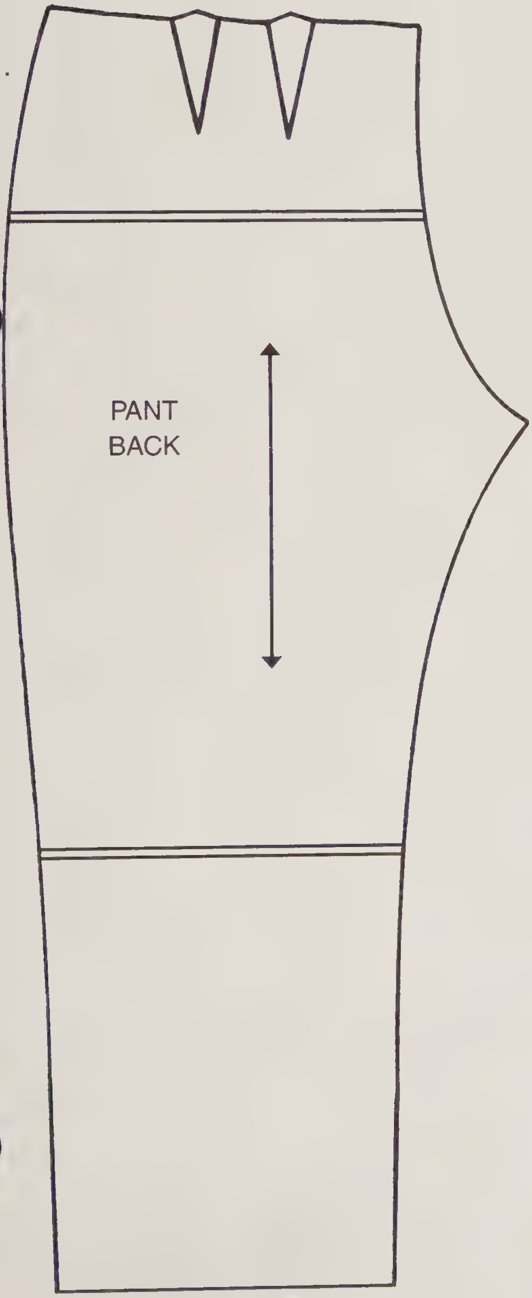
Supplies needed:

ruler	transparent tape
scissors	T-square
tissue paper	

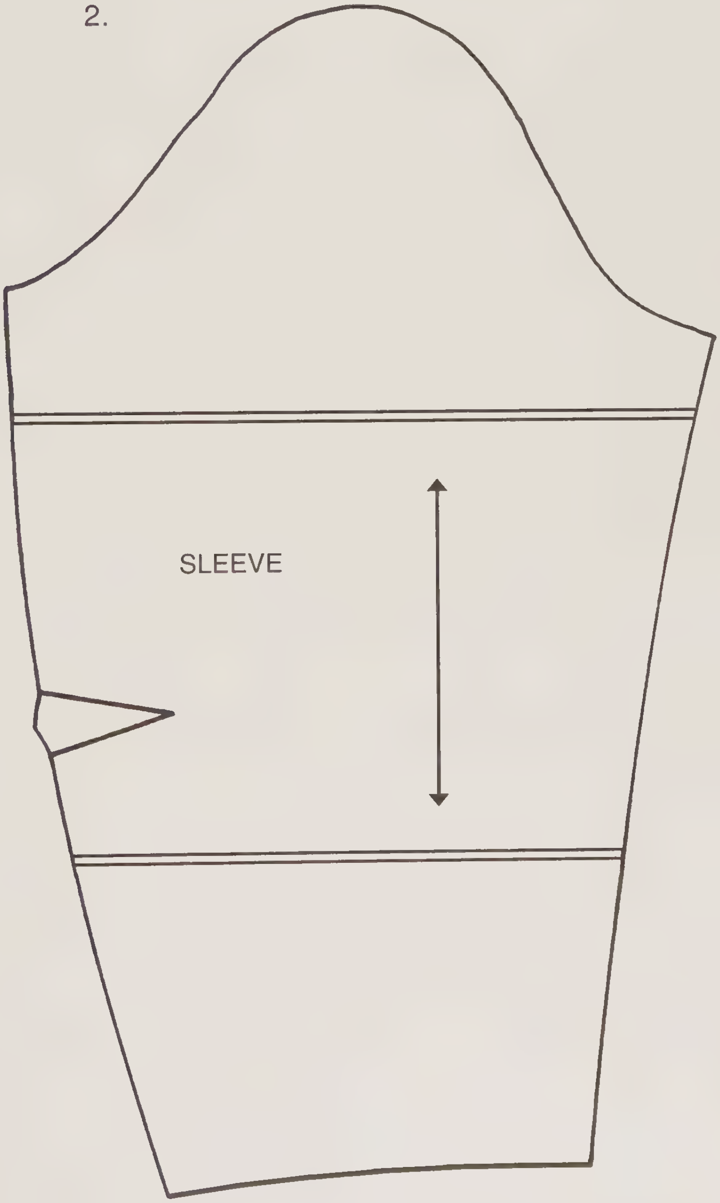
Cut out the pattern pieces from the following pages and alter as instructed. You may refer to the information provided earlier in this lesson. Attach the adjusted pattern pieces to a sheet of paper and label each one.

1. Lengthen the crotch of the pants to 2¼ inches. Then taper the pant leg 1 inch.
   A. Current crotch length: __________ Amount of increase needed: __________
   B. Amount of decrease needed at each pant leg seam: __________
2. Lengthen the sleeve a total of ½ inch.
   A. Amount of increase needed above the elbow: __________
   B. Amount of increase needed below the elbow: __________

1.



2.

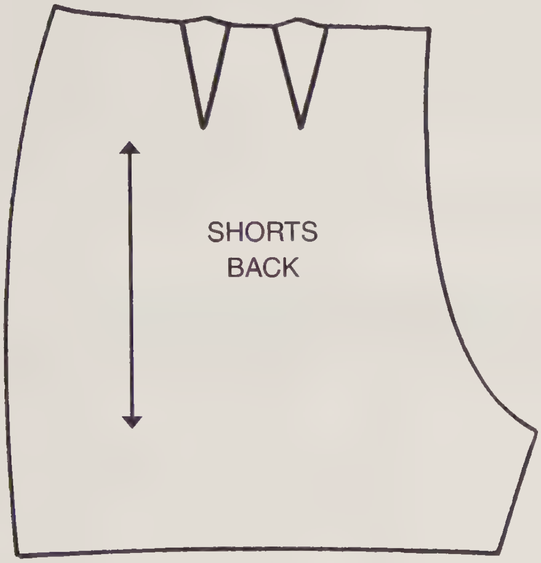


(Continued)

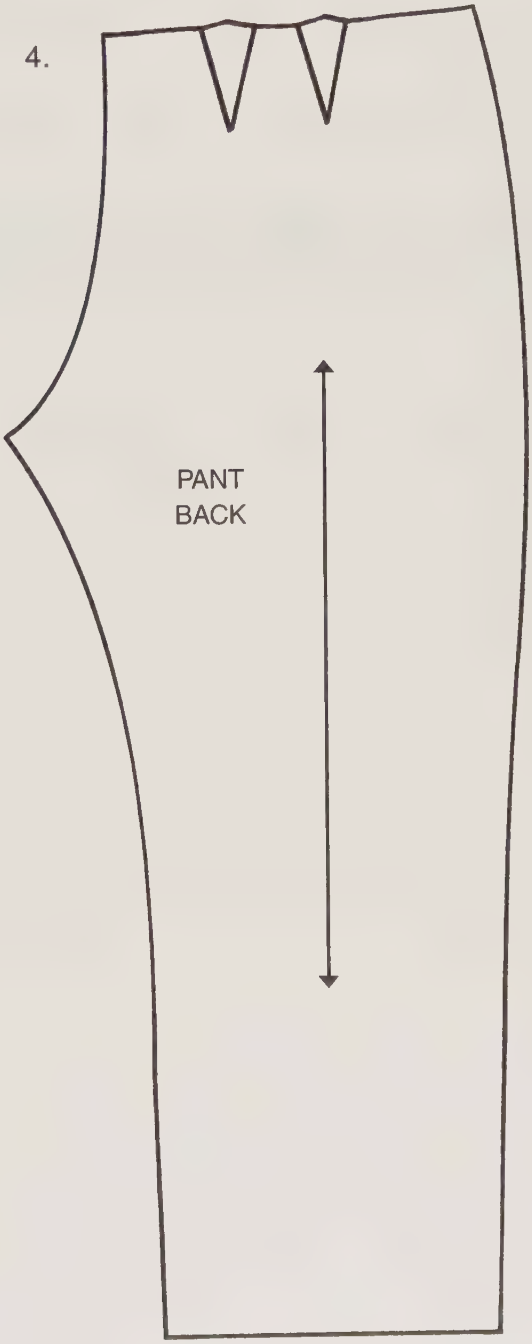
Name ____

3. Add 1 inch to the waist measurement of the shorts. Amount of increase needed on the back pattern piece: ________________
4. Increase the hip measurement of the pants by 1 inch. Amount of increase needed on the pants back: ____________________
5. Shorten the shirt length to 4 inches.
   A. Current length (measure along the center front): ________________
   B. Amount of decrease needed: __________________

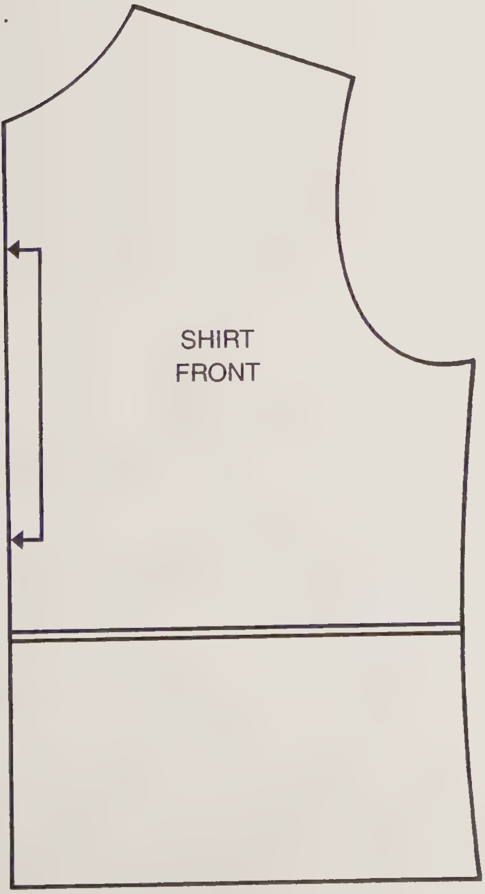
3.



4.



5.



Name ______________________________

Date ____________________ Period __________

Activity 7-2: Determining Pattern Adjustments

This activity will help you determine what pattern adjustments to make. Follow these steps:

1. Take your body measurements (review Lesson 1, "Taking Body Measurements and Selecting Your Pattern Size") and record below.
2. Record the measurements from the back of a pattern envelope in the correct column below. For measurements not listed on the envelope, measure the corresponding places on the pattern pieces. (Be sure to exclude seam allowances, darts, etc.)
3. Keeping ease in mind, compare your measurements with the pattern measurements. Record the amount to be added or decreased in the "Adjustment Needed" column.
4. If adjustments exceed 2 inches, consider purchasing a different pattern size.

	Your Measurements	Pattern Measurements	Ease to Allow	Adjustment Needed
Bust			3 to 4 inches	
Waist			½ inch for fitted waist	
Hips			1 inch (snug fit) 2 inches (roomy fit)	
Back waist length			½ inch	
Hem length			3 inches	
Crotch depth			½ inch (35-inch hips) ¾ inch (35-inch to 38-inch hips) 1 inch (38-inch plus)	
Sleeve length (with arm bent)				
Shoulders				

Name ______________________________

Date ________________ Period __________

Activity 7-3: Evaluating Learning

Provide complete responses to the following questions or statements.

1. Explain how to determine when a pattern needs to be adjusted.

____

____

____

____

2. Explain the importance of ease allowances provided in patterns.

____

____

____

____

3. How much ease is generally allowed in the following pattern areas?

chest or bust ______________________________

waist ______________________________

hips ______________________________

crotch ______________________________

Do you feel that you understand how to adjust pattern length?	Yes	No	Uncertain
Do you feel that you understand how to adjust pattern width?	Yes	No	Uncertain
Do you feel that you understand pattern adjusting well enough that you are willing to attempt other pattern adjustments?	Yes	No	Uncertain

(Note additional comments here.) ______________________________

____

____

____

____

____

Lesson 8

Pattern Layout, Pinning and Cutting

Objectives

This lesson will help you to

- identify the various ways fabric may be folded in preparation for layout, pinning, and cutting.
- correctly lay out a pattern.
- give reasons for various layout, pinning, and cutting procedures.
- interpret layout, pinning, and cutting information found on the pattern instruction sheet.

Words to Know

lengthwise fold
partial fold
crosswise fold
double fold
repeat
even plaid
uneven plaid

Gathering Information

Following the correct pattern layout will help ensure that your garment is cut out on-grain. Pinning and cutting your garment carefully will avoid wasting fabric. This lesson will provide the information you need to lay out, pin, and cut out your pattern pieces.

You will first need to make sure the cut ends of your fabric are on-grain. If they are off-grain, follow the directions in Lesson 4, "Fabric Preparation," to straighten the grain before preparing the fabric for pattern layout.

Folding the Fabric

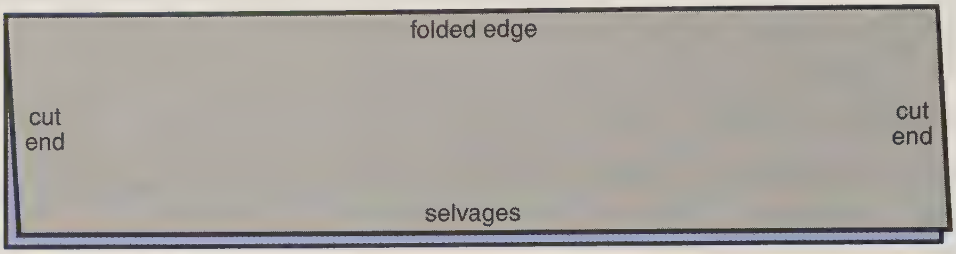
Fabric can be folded in a variety of ways before pattern pieces are positioned for cutting. The type of fold used depends on

- the number of pattern pieces that must be placed on a folded edge
- the fold that results in the most economic use of the fabric
- the width of the fabric
- the pattern size

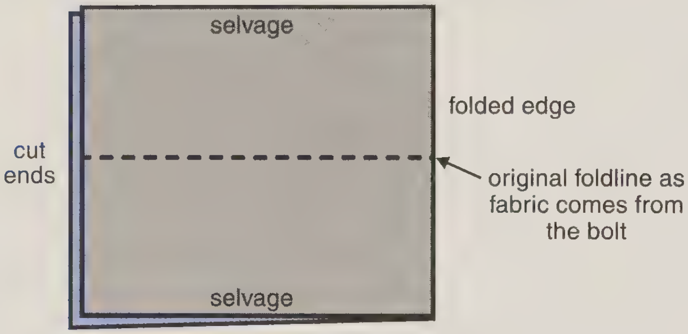
Pattern companies have already taken these factors into consideration for you. Therefore, you should fold your fabric as shown in the diagram found on your pattern instruction sheet.

(Continued)

Lengthwise fold. Most fabric is folded lengthwise on the bolt. Pattern instructions generally show a ***lengthwise fold*** with fabric folded in half lengthwise so that selvages match. However, lengthwise folds can also be ***partial folds*** leaving some of the fabric extended as a single layer.

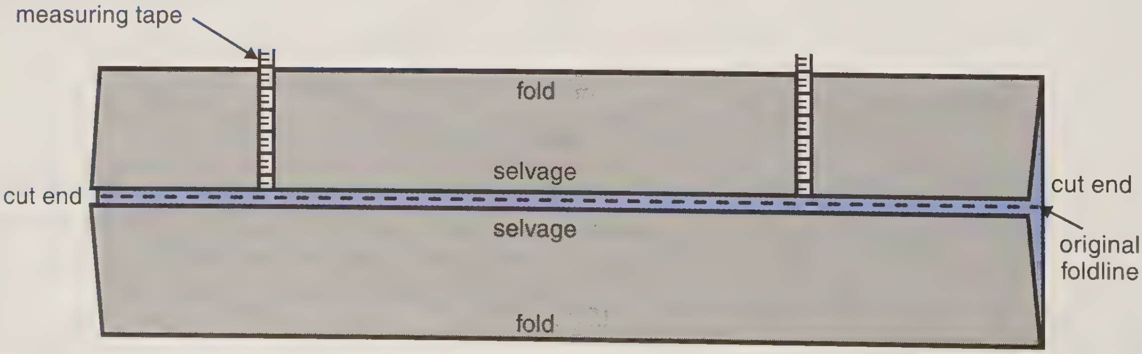

folded edge
cut end
cut end
selvages

Crosswise fold. For a ***crosswise fold***, fabric is usually folded so the cut ends match. However, a crosswise fold can also be a partial fold. A crosswise fold is often used when pattern pieces are too wide to fit on fabric folded lengthwise.


selvage
folded edge
cut ends
original foldline as fabric comes from the bolt
selvage

Double fold. When making a ***double fold***, be sure the full length of each folded side is the same width. Measure as shown. This will ensure that the folded edges are straight with the grain.

You may use a double fold when you cannot press the original foldline out of the fabric. You may also use it when several pattern pieces are to be cut on a fold.


measuring tape
fold
selvage
cut end
cut end
selvage
original foldline
fold

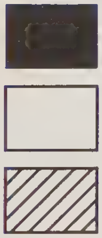
Folding Knit Fabrics

Try to press out the lengthwise crease on knit fabrics before laying out pattern pieces. Often this crease is permanent in knit fabrics and, if used on the garment, may be unsightly. If you cannot press out the crease, you can avoid using it by folding your fabric with a double fold. Another possibility is to position the crease to work with the pattern design. For instance, place pattern pieces so that the crease will fall down the center of sleeves or pant legs.

Guidelines for Pattern Layout

Use the following guidelines when laying out your pattern pieces on your fabric.

- Circle the correct layout diagram on your pattern instruction sheet. Choose the correct diagram according to the pattern view, size, and fabric width.
- Make any desired fit or design alterations to your pattern before laying it out. (Refer to Lesson 7, "Pattern Adjustments," for more information on alterations.)
- Lay all pattern pieces on the fabric before pinning any of them in place. This will allow you to make sure that all pieces will fit on the fabric.

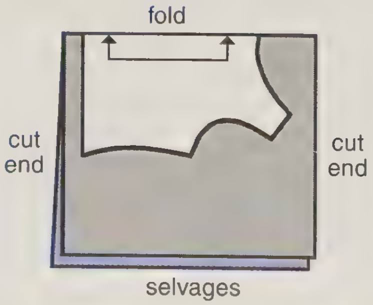


- Follow the shading key shown on your instruction sheet. Solidly-shaded areas denote fabric. Unshaded areas denote pattern pieces to be placed with the printed side up. Lines denote pattern pieces to be placed with the printed side down.
- Sometimes a layout diagram will show a pattern piece that is placed halfway off the fabric. This piece will usually be accompanied with a *. Find the star on your instruction sheet and follow the directions given. This generally means that there is not enough room to place the pattern piece on the folded fabric. The instructions will indicate that you should cut out all of the other pattern pieces. Then you should open out the fabric to accommodate the piece that was placed partially off the fabric.

(Continued)

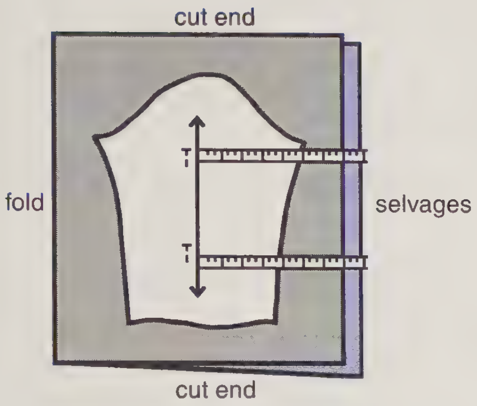
- Sometimes a layout diagram will show two pattern pieces with the same number. This indicates that the pattern piece will have to be cut out twice, such as when you need four cuff pieces. The pattern will only include one pattern piece. Therefore, simply relocate the pattern piece and cut it out a second time.
- Avoid placing pattern pieces on the selvage edges of the fabric. Selvages do not give and can cause seams to pucker. If you must place a piece on the selvage, clip the selvage about every ½ inch to create more give.
- When you are cutting two layers of fabric, the pattern pieces do not have to be placed printed side up. If you are cutting one layer, however, the pattern pieces must be placed printed side up. They must also be placed on the right side of the fabric. Otherwise, you may find that pattern pieces fit the wrong side of your body.
- Be sure to use the "with nap" layout when working with napped fabrics. (Refer to Lesson 2, "The Pattern Envelope," for more information on napped fabrics.) Also use this layout when working with knits, as most knits tend to have shading in one direction. If this layout is not followed, differences in color may appear on the finished garment. You can also use this layout when working with fabrics that do not have nap. However, "with nap" layouts usually require more yardage.

Placing Pieces on the Fold



Check for pattern pieces that must be placed on the fabric fold. When cutting out these pieces, never cut along the folded edge.

Placing Pieces On-Grain



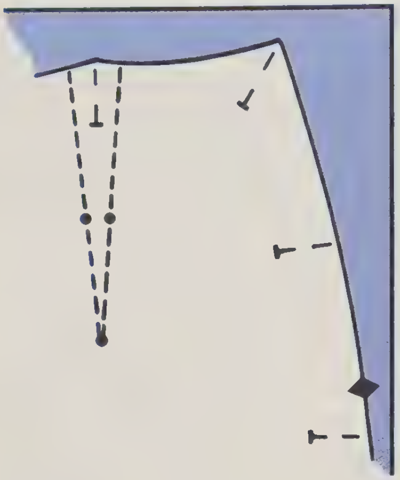
Accurate measuring will help you make sure your pattern pieces are cut out on-grain. Follow these steps:

1. Place each pattern piece so the grainline arrow runs lengthwise on the fabric. Grainline arrows should run parallel to the selvage edges regardless of the way the fabric has been folded.
2. Pin one end of the grainline arrow to hold it in place.
3. Measure from the pinned end of the arrow to the fabric selvage edge.
4. Now measure from the other end of the grainline arrow to the fabric selvage edge. Make sure it is the same distance from the selvage as the end you have already pinned in place. Adjust the distance if necessary and then pin the arrow in place.
5. Pin the edges of the pattern piece in place.

The lengthwise grain on knits is seen as a rib. Use this rib to place pattern pieces on the straight of grain.

Special techniques are used when placing pattern pieces on off-grain fabrics that cannot be straightened. For solid color fabrics or fabrics with an all-over design, lay the fabric so that the selvages are together. Make sure the lengthwise fold lies smoothly. (You will not be able to line up the cut ends of the fabric.) Then measure from the grainline arrows to the selvages as described above. For off-grain fabrics with a stripe, plaid, or obvious horizontal design, ignore the lengthwise grain. Instead, follow the print as much as possible. Cut the pattern pieces out of a single layer of fabric. Match the design of the second piece with the first.

Pinning Pattern Pieces



Use the following guidelines when pinning your pattern pieces to your fabric:

- Pin with care to prevent inaccurate cutting. A cutting error of ⅛ inch on each side of a pattern piece can result in a ½ inch difference in the final garment.
- Use only enough pins to hold down the pattern securely. Depending on the fabric and the size of the pattern piece, placing pins about six inches apart is usually enough.
- Place pins completely inside the cutting line.
- Place pins diagonally in corners.
- Use pattern weights instead of pins to hold the pattern in position, if desired. However, be sure to pin grainlines in place first. Position weights, inside the cutting lines, on one pattern piece at a time.

Cutting Out Pattern Pieces

Use the following guidelines, when cutting out pattern pieces:

- Use sharp shears or a rotary cutter to cut out your pattern pieces. Never use pinking shears. Pattern pieces cannot be cut out accurately with pinking shears.
- Do not allow the fabric to hang over the edge of the table when you are cutting. This is especially true when working with knits and other stretchy fabrics. The weight of the fabric hanging over the table edge will pull the fabric and result in inaccurate cutting. Also, be careful to leave the fabric resting on the table as you cut. Lifting the fabric will result in inaccurate cutting.
- Cut notches out away from the seam allowance. Cutting notches into the seam allowance will weaken the seam. This will also prevent you from letting the seam out if a looser fit is needed.

(Continued)

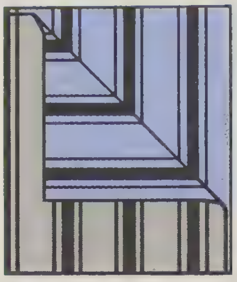
- When using a rotary cutter, always be sure to place a protective plastic cutting mat beneath the fabric. Shift the cutting mat under your work as you proceed around the pattern. A metal ruler can be used as a guide for cutting straight edges. When cutting complex shapes, a small rotary wheel is easier to maneuver than larger ones. You will not be able to cut out the notches with a rotary cutter. Instead, cut off the notches and mark them using another technique, such as chalk or washable marking pen.
- Before cutting pattern pieces from a multisize pattern, determine which lines you need to follow. To do this, compare your measurements with those on the envelope size chart. Identify which size you should use for different areas of your body. Use a colored pen to trace along the lines you plan to follow before placing the pattern on the fabric. Taper from the cutting line for one size into the cutting line for another size, as needed. You might also wish to cut out the pattern on the desired size lines before placing it on the fabric.

Working with Striped Fabrics

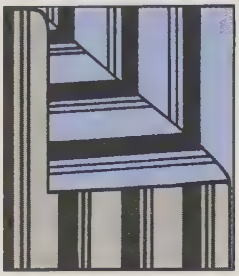
Keep the following suggestions in mind when working with striped fabrics:

- Stripes should be matched at seamlines to form a continuous line around the body. You may have to purchase extra fabric for matching.
- Avoid using patterns that are labeled “not suitable for stripes.” Matching stripes on these patterns will be difficult.
- Interesting patterns may be created with stripes by cutting small pattern pieces on the bias.
- When using stripes vertically, place the dominant stripe at the center of major garment pieces.
- Make certain that stripes are on-grain before purchasing the fabric.

(Continued)



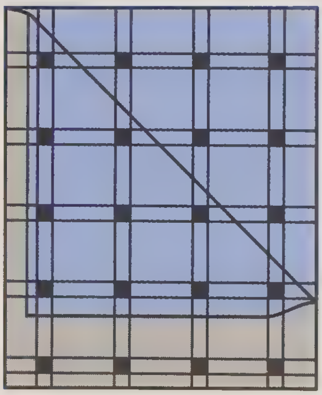
even stripe



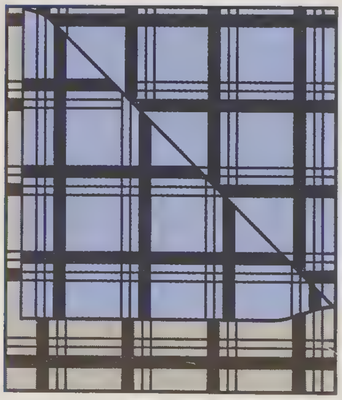
uneven stripe

- You need to determine whether a stripe is even or uneven. To do this, fold the fabric lengthwise along the center of a main stripe. Then fold back one corner. Compare the stripe pattern on the bottom layer of fabric with the stripe pattern on the top layer. If it lines up perfectly, the stripe is *even.* If the stripe patterns do not line up, the stripe is *uneven.*
- When cutting uneven stripes, use a "with nap" layout. Cut each pattern piece from a single layer of fabric. When cutting a pattern piece for the second time, be sure to turn it over. This will give you a left and right garment side. Also, place notches at the same point in the stripe pattern as you placed them for the first cutting.

Working with Plaid Fabrics



even plaid



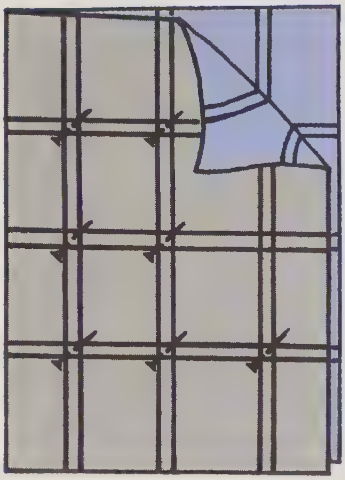
uneven plaid

Keep the following suggestions in mind when working with plaid fabrics:

- You need to determine whether a plaid is even or uneven. To do this, fold the plaid diagonally through the center of a repeat. A ***repeat*** is one complete, four-sided design in the fabric. An ***even plaid*** has colored lines and spaces that are the same in both the lengthwise and crosswise directions. An ***uneven plaid*** has lines and spaces that will not match in either one or both directions.
- Plaids should be matched at seamlines to form a continuous design around the body. To match plaids, pattern pieces need to be aligned on the fabric. The important thing to remember when matching plaids is to match stitching lines rather than cutting lines. Since multisized patterns are printed without the stitching lines, begin by marking stitching lines on your pattern tissue in a few key places. Simply measure in from the cutting line ⅝ inch and draw a stitching line. Then line up corresponding pieces on the same color bars of the plaid.

(Continued)

- Some areas of a garment are difficult or impossible to match. For instance, darts, diagonal shoulder seams, side seams above a bust dart. Sleeves cannot be matched at both the front and back armhole. Match the front because that is what people will notice most. Also, try to make fitting adjustments before cutting out the pattern. Adjusting a garment once it has been cut out may mismatch the plaid.



- For even plaids, align the plaid in one layer with the plaid in the other layer of the folded fabric. Do this before laying any pattern pieces in place. To align the plaids, insert a pin in the plaid. Bring the pin through the bottom layer of fabric at the same point in the plaid. Repeat pinning in this manner at intervals that will hold the plaid in position. Leave the pins in place until the pattern pieces have been cut out.
- When cutting uneven plaids, use the same techniques you use to cut uneven stripes.

Name ______________________________

Date ________________ Period __________

Activity 8-1: Practicing Folding and Laying Out the Pattern

Supplies needed:

paper	pattern pieces 8A through 8K (pages 115 and 117)
scissors	glue or tape

This activity is made up of three problems. For each problem, cut out the specified pattern pieces found at the end of the lesson. Also cut a piece of paper the size of the dimensions given to represent fabric from which the garment is to be cut. Try various fabric folds—lengthwise, crosswise, partial, and double—and ways of placing the pattern pieces on the fabric. Decide on the best way to fold the fabric and lay out the pattern pieces. Then glue or tape the pieces in place. Attach your results to a sheet of paper. Be prepared to discuss your work.

Garment 1 — Knit Top

Use pattern pieces 8A and 8B.

Cut a sheet of paper 4½ by 8¾ inches for the fabric.

Consider the lengthwise grain to run parallel to the 4½-inch edge. A permanent lengthwise crease runs through the center of the fabric.

Garment 2 — Skirt

Use pattern pieces 8C, 8D, and 8E.

Cut a sheet of paper 6¼ by 11 inches for the fabric. Consider the lengthwise grain to run parallel to the 11-inch edge.

Garment 3 — Shirt

Use pattern pieces 8F, 8G, 8H, 8I, 8J, and 8K.

Use a single 8½ by 11-inch sheet of paper for the fabric.

Consider the lengthwise grain to run parallel to the 11-inch edge.

Name ______________________________

Date ________________ Period __________

Activity 8-2: Using the Instruction Sheet

You will be given a pattern instruction sheet. The instruction sheet and the information in this lesson will be your sources of information. Look over the instruction sheet and answer the questions below. Be prepared to discuss your answers.

1. Your instruction sheet shows a variety of pattern layout diagrams. Explain how to select the pattern layout to follow. What information do you need to know in order to make a decision about which layout to use?

2. What do the following shadings indicate?

   ■ Solid: ______________________________

   □ Unshaded: ______________________________

   ▨ Lined: ______________________________

3. When using a crosswise fold, on which grain are the pattern pieces placed?

4. When using a lengthwise fold, on which grain are the pattern pieces placed?

5. The layout diagram shows two pattern pieces with the same number. However, you have only one pattern piece in your envelope. What should you do?

6. Why is a crosswise fold sometimes used instead of a lengthwise fold?

7. What is meant when you see a layout diagram that has one pattern piece placed halfway off the fabric?

8. Some layout diagrams may be labeled "with nap" or "without nap." What do these words mean?

9. Can you use a "with nap" layout even if you do not have napped fabric? Explain.

(Continued)

Name ________________________________

10. Can you use a "without nap" layout with napped fabric? Explain.

11. In your own words, explain why following the layout diagram on the instruction sheet is important.

12. How do you determine if pattern pieces are placed on the straight of grain?

13. What layout diagrams, other than for the main garment pieces, may be included on the instruction sheet?

14. Explain the reasons for the following guidelines:

    A. Never cut out pattern pieces with pinking shears.

    B. Cut all notches out, away from the seam allowance.

    C. Do not use the selvage edges of the fabric. If it is necessary to do so, be sure to clip the selvage about every ½ inch.

    D. Pin all pattern pieces on the fabric before cutting them out.

    E. When cutting a single thickness of fabric, place the pattern printed side up on the right side of the fabric. Make an exception to this guideline when working with uneven stripes and plaids.

15. Why should you follow the napped layout when sewing on knit fabric?

16. The crease line on knit fabric may not always disappear when pressed or washed. What must you do when cutting out pattern pieces if this is a problem?

Name ____________________________________

Date ____________________ Period ____________

Activity 8-3: Evaluating Learning

Assess your understanding of layout, pinning, and cutting by completing the exercises below.

1. Sketch the three ways of folding fabric. On each sketch, draw lines indicating the lengthwise, crosswise, and bias grainlines. Be sure to label the sketches and the grainlines.
2. Briefly, explain how to select the correct pattern layout from those given on the instruction sheet.

____

____

____

3. Explain, in your own words, how to place a pattern piece on the straight of grain.

____

____

____

4. What is the meaning of the word *napped* and why is it important when laying pattern pieces on fabric?

____

____

____

5. Give three important suggestions for pinning pattern pieces to fabric.

____

____

____

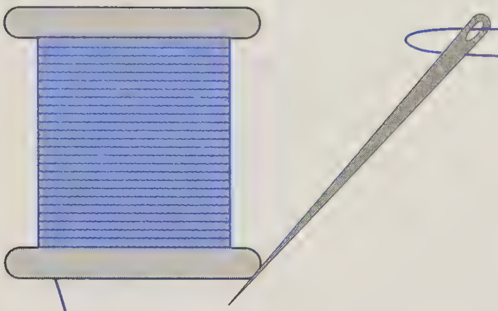
6. Give three important suggestions for cutting out pattern pieces.

____

____

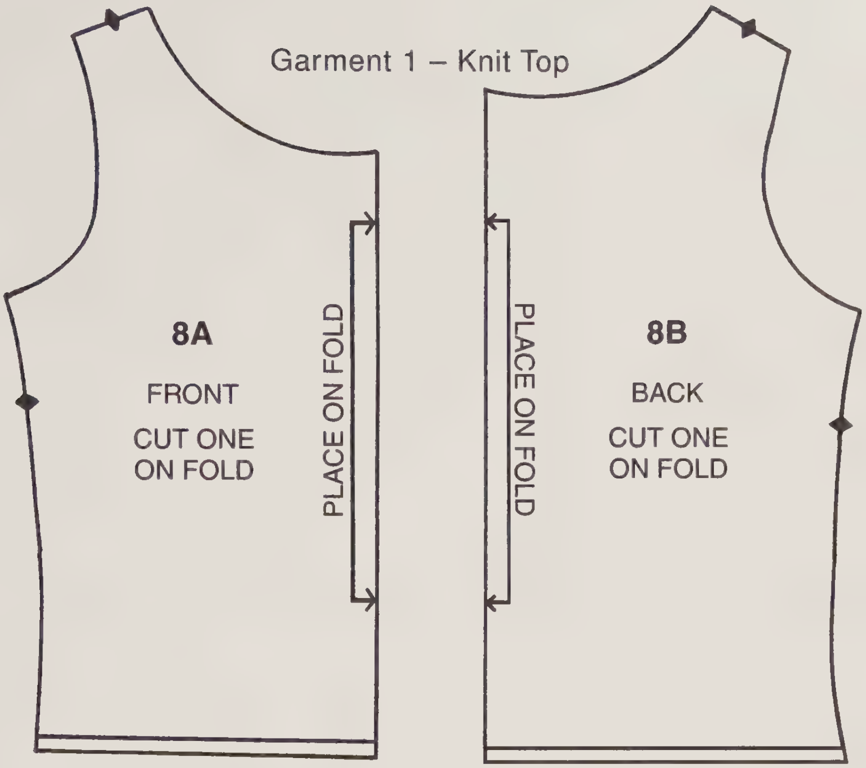
____

notes

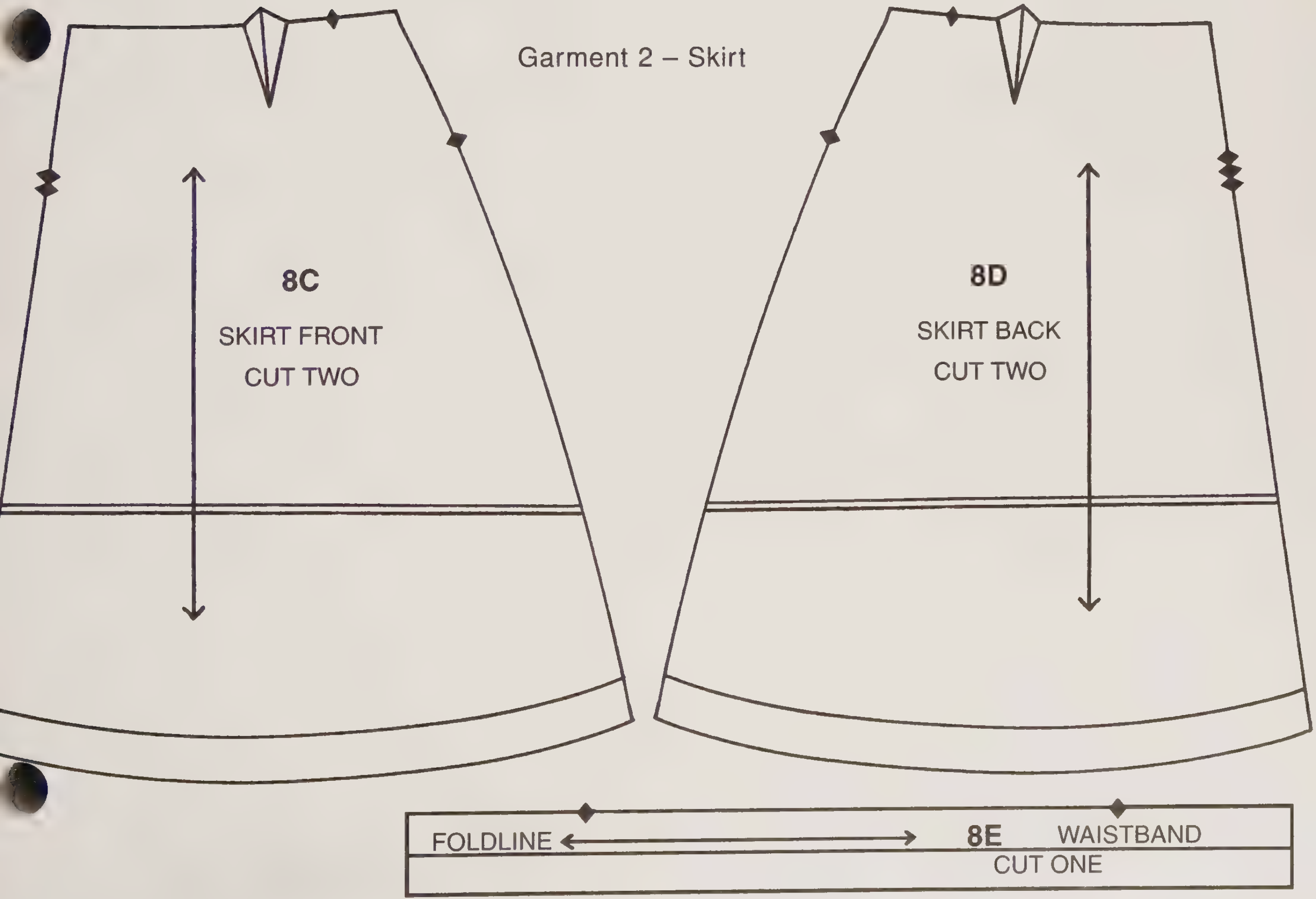


attern pieces for Activity 8-1

Garment 1 – Knit Top


8A
FRONT
CUT ONE
ON FOLD
PLACE ON FOLD
PLACE ON FOLD
8B
BACK
CUT ONE
ON FOLD

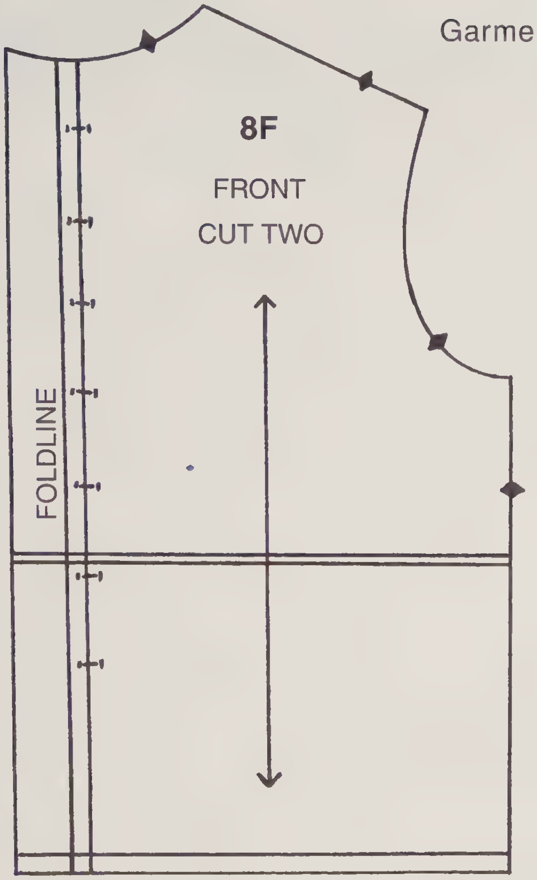
Garment 2 – Skirt

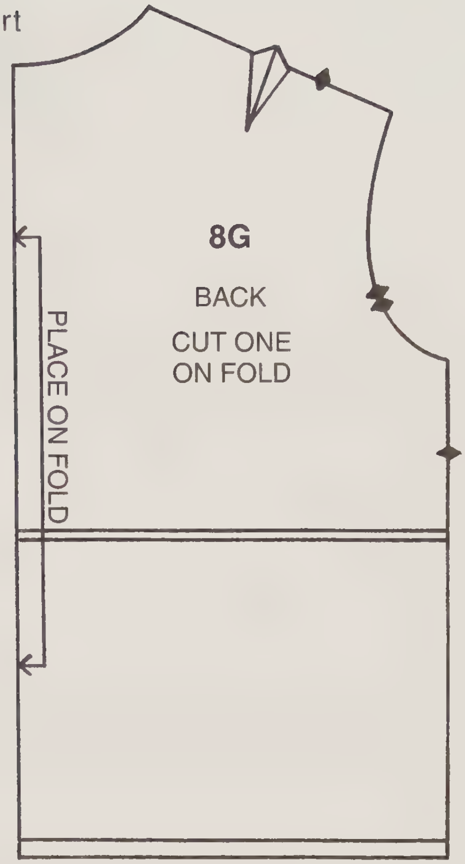

8C
SKIRT FRONT
CUT TWO
8D
SKIRT BACK
CUT TWO
FOLDLINE
8E WAISTBAND
CUT ONE

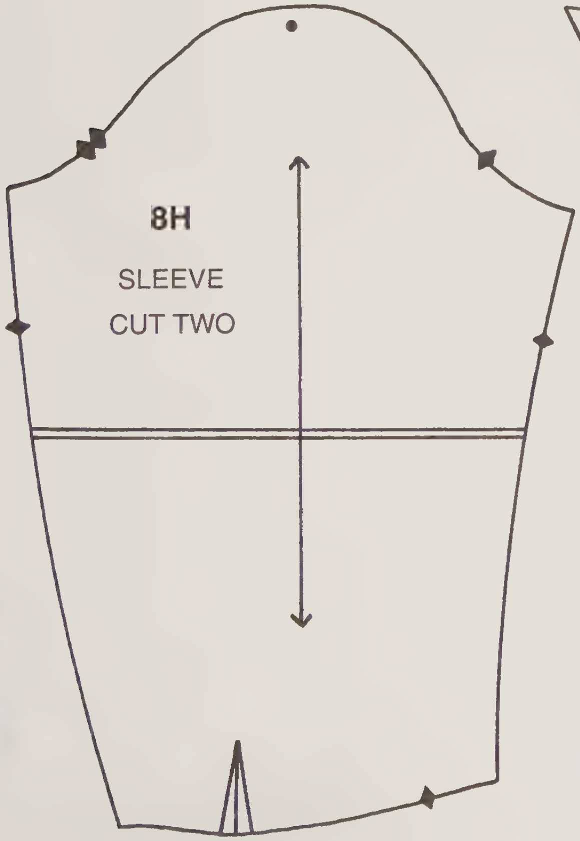
(Continued)

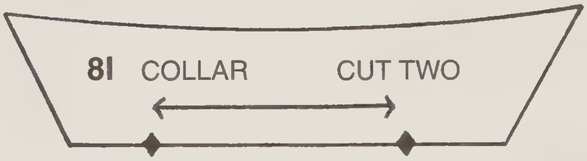
ttern pieces for Activity 8-1

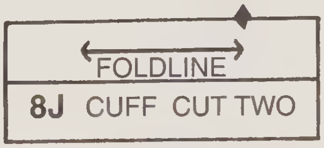
Garment 3 – Shirt

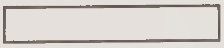

8F
FRONT
CUT TWO
FOLDLINE


8G
BACK
CUT ONE
ON FOLD
PLACE ON FOLD


8H
SLEEVE
CUT TWO


8I COLLAR CUT TWO

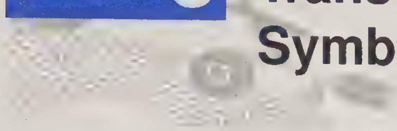

FOLDLINE
8J CUFF CUT TWO



8K
SLEEVE PLACKET
CUT TWO

Lesson 9

Transferring Pattern Symbols to the Fabric



Objectives

This lesson will help you to

- identify the various methods for transferring pattern symbols to fabric.
- select the method of marking that is most appropriate for various types of fabric and symbols.
- practice using the various marking methods.

Word to Know

tailor's tacks

Gathering Information

In Lesson 6, "Pattern Symbols," various symbols that appear on pattern pieces were illustrated and defined. For these symbols to be useful, however, you need to transfer them to the fabric pieces. This step is done after fabric pieces have been cut, before removing the pattern.

There is no single, correct method of transferring a specific pattern symbol. Several methods may serve the same purpose. For each marking situation, you will want to select the quickest and easiest of the methods. Your selection will depend on your fabric and the symbol you are marking. This lesson will provide the information you will need to make decisions about transferring pattern symbols.

Using Tracing Paper and Wheel

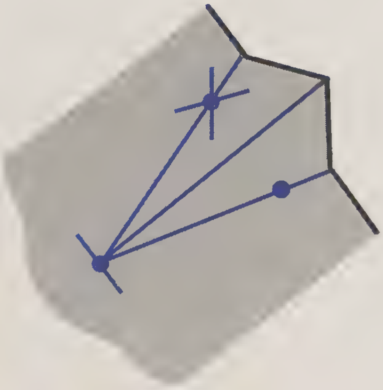
Description of method. A sheet of color-coated paper is placed on the fabric surface to be marked. The paper is often placed between the fabric layers and against the wrong sides. This allows you to mark two surfaces at one time. A tracing wheel, either grooved or smooth, is used to trace the pattern symbols. Color is transferred to the fabric wherever pressure is applied to the paper with the wheel.

You can usually remove markings made with tracing paper by laundering. You can also use a fabric eraser, brush, or damp cloth to remove the markings. Marks made by some types of tracing paper will disappear in 24 to 72 hours. Be sure to check the type of tracing paper you are using to determine how to remove the markings.

(Continued)

When using this method, keep the following suggestions in mind:

- Test this method on a fabric swatch to be sure markings will show clearly. Try using a grooved and a smooth tracing wheel to see which works best for your fabric. After marking the swatch, test to see which method works best for removing the marks.
- Select a color of tracing paper that contrasts with the fabric.
- Work on a protected table surface. Color from the paper and pressure from the tracing wheel can damage work surfaces.
- When marking straight lines, use a ruler as a guide. Place the ruler along the line to be marked. Then run the wheel along the straight edge of the ruler.
- To mark dots, make an *X* with the tracing wheel over the center of the dot.
- To mark the ends of darts, mark a straight line across the point.



When to use this method. Use this marking method preferably with washable, smooth-surfaced, light to medium weight fabric.

Shortcomings. The colored markings left by tracing paper may not be visible on heavily textured or bulky fabrics. Also, the color from the paper may be difficult to remove from some fabrics.

One other shortcoming of this method is that the tracing wheel can damage the pattern. This limits the number of times you can reuse the pattern.

Using Tailor's Chalk

Description of method. Chalk is available in pencil form or in small pieces. Some types of chalk are powdery and tend to brush off easily. Others are waxy and may be difficult to remove from some fabrics.

(Continued)

Chalk is used to mark the dots on a pattern. The dots are first marked by pins that are pushed through both layers of fabric. The pinheads are gently pushed through the pattern tissue and the pattern is removed. Chalk marks are then made on the wrong sides of both layers of fabric where the pins are located. The dots may be connected with the help of a ruler.

When to use this method. Tailor's chalk can be used on fabrics that allow the chalk to be visible yet easily brushed from the surface. Chalk does not show up well on heavily textured, bulky fabrics. Some tightly woven fabrics retain chalk. Therefore, another marking method would work better with these fabrics.

Chalk is a good choice for marking the wrong sides of fabric pieces that might easily be confused. You might mark pieces as being for the left or right side of a garment. You might draw arrows on napped fabric before cutting out a pattern to help you keep the nap running in the same direction. Chalk marks can also be used to help you distinguish between similar garment pieces, such as under and upper collars.

Shortcomings. The accuracy of this method is reduced if the pins are not pushed straight through both layers of fabric. This prevents pattern symbols from being properly aligned. This method also damages the pattern tissue, limiting its reuse.

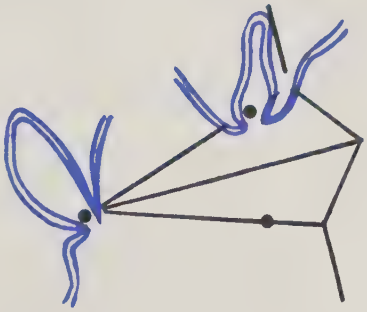
Using Fabric Marking Pen

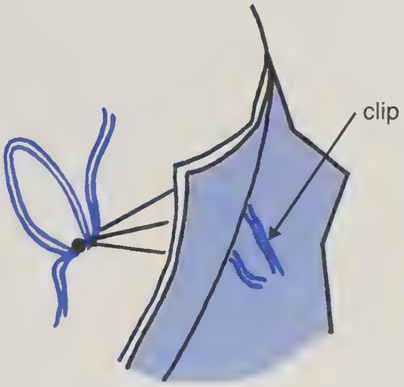
Description of method. Special pens are used to mark fabric. Some marks are wiped away with a moist towel and others fade away, but some are permanent.

When to use this method. Water-soluble marking pens are used on fabric that can stand the application of water. Permanent marking pens should only be used in hidden places.

Shortcoming. Only one fabric layer can be marked at a time. Be sure to remove the marks before pressing since heat can set the colors, making them difficult to remove. Marks cannot be removed from all fabrics.

Using Tailor's Tacks





Description of method. A thread loop is made through all layers of the fabric to mark the location of each pattern symbol.

Follow these steps:

1. Use a long, double thread in the needle.
2. Take a small stitch through the center of the pattern symbol and both layers of fabric. Do not pull the thread completely through the fabric—leave the end extend about two inches.
3. Take another small stitch through the dot. Draw the threads through, leaving a loop that is about two inches high. Clip the thread leaving another two-inch end. Continue making stitches in this way until the symbol has been marked.
4. Clip the loops and remove the pattern. Then separate the layers of fabric about half an inch. Clip the threads between the layers.

When to use this method. Use this method on white or sheer fabrics as well as napped, pile, thick, or rough surfaced fabrics. Also use it on any other fabrics on which other methods of marking are not visible.

Shortcoming. This method of marking is time-consuming.

Using Clipping

Description of method. A small clip is cut into the seam allowance at the location of the pattern symbol. Be sure not to cut into the seam allowance more than ¼ inch.

When to use this method. This method is best used to mark foldlines, center front lines, and the tops of sleeve caps. This method is appropriate only for symbols that are located in or near the seam allowance.

Shortcomings. This method may weaken seam allowances and make alterations of marked seams no longer possible.

Using Pin Marking

Description of method. Pins are positioned on the fabric where the pattern symbol is to be transferred.

When to use this method. This method is best used as an occasional and temporary means of marking.

Shortcomings. This method is not very accurate. Manipulating the paper pattern and positioning the pins on two layers of fabric is difficult. Pins tend to get in the way when stitching and may fall out of the fabric before stitching is completed.

Using Baste Marking

Description of method. With threaded needle, use long basting stitches to mark long straight lines. Use smaller stitches to mark smaller symbols such as buttonholes.

When to use this method. This method is generally used to mark center front lines and grainlines.

Shortcoming. As this method requires hand stitching, it is quite time-consuming.

Activity 9-1: Practicing Various Marking Methods

Supplies needed:

- needle
- thread
- scissors
- ruler
- pins
- fabric scraps
- tracing paper and wheel
- tailor's chalk
- fabric marking pen
- pattern piece 9A (page 127)

Use pattern piece 9A to cut out one two-layer garment piece. Practice each of the marking methods discussed in this lesson—tracing paper and wheel, tailor's chalk, fabric marking pen, tailor's tacks, clipping, pin marking, and baste marking. Choose the best method for each type of symbol.

Name ______________________________

Date ________________ Period __________

Activity 9-2: Determining Which Marking Method to Use

Your teacher will give you seven numbered fabric samples. Mount a swatch or write a brief description of each fabric in the appropriate box in the first column of the chart below. In the second column, several types of pattern symbols are listed. Your task is to determine the best method of marking to use for each symbol on the given fabric.

Fabric Swatch	Symbol	Marking Method	Reason for Choice
1.	Dart		
	Front foldline		
2.	Dart		
	Buttonholes		
3.	Dart		
	Zipper stitching		
4.	Top of sleeve		
	Front foldline		
5.	Buttonholes		
	Tucks		
6.	Pocket location		
	Dart		
7.	Dots		
	Center front line		

Name ________________________________

Date ____________________ Period ____________

Activity 9-3: Evaluating Learning

The marking sample you completed in Activity 9-1 will be evaluated using the chart below. Also, space is provided for you to list ideas, suggestions, or guidelines for marking pattern symbols.

Tracing Paper and Wheel	Poor	Fair	Good	Excellent
Markings are clearly visible.				
Markings are accurately placed.				
Color is appropriate for fabric.				

Tailor's Chalk				
Markings are clearly visible.				
Markings are accurately placed.				

Fabric Marking Pen				
Markings are clearly visible.				
Markings are accurately placed.				

Tailor's Tacks				
Thread loops and ends were left long enough (about two inches) to allow for secure, visible markings.				
Threads clipped to extend on both sides of fabric.				
Markings are accurately placed.				

Clipping				
Clipping did not cut into the seam allowance more than ¼ inch.				
Markings are accurately placed.				

Pin Marking				
Pins are accurately placed.				

Baste Marking				
Basting lines are straight.				
Markings are accurately placed.				
Stitch length is appropriate for symbol being marked.				

(Continued)

Name ________________________________

In your own words, list five ideas, suggestions, or guidelines that might be considered most important for transferring pattern symbols to fabric.

1. ____

____

2. ____

____

3. ____

____

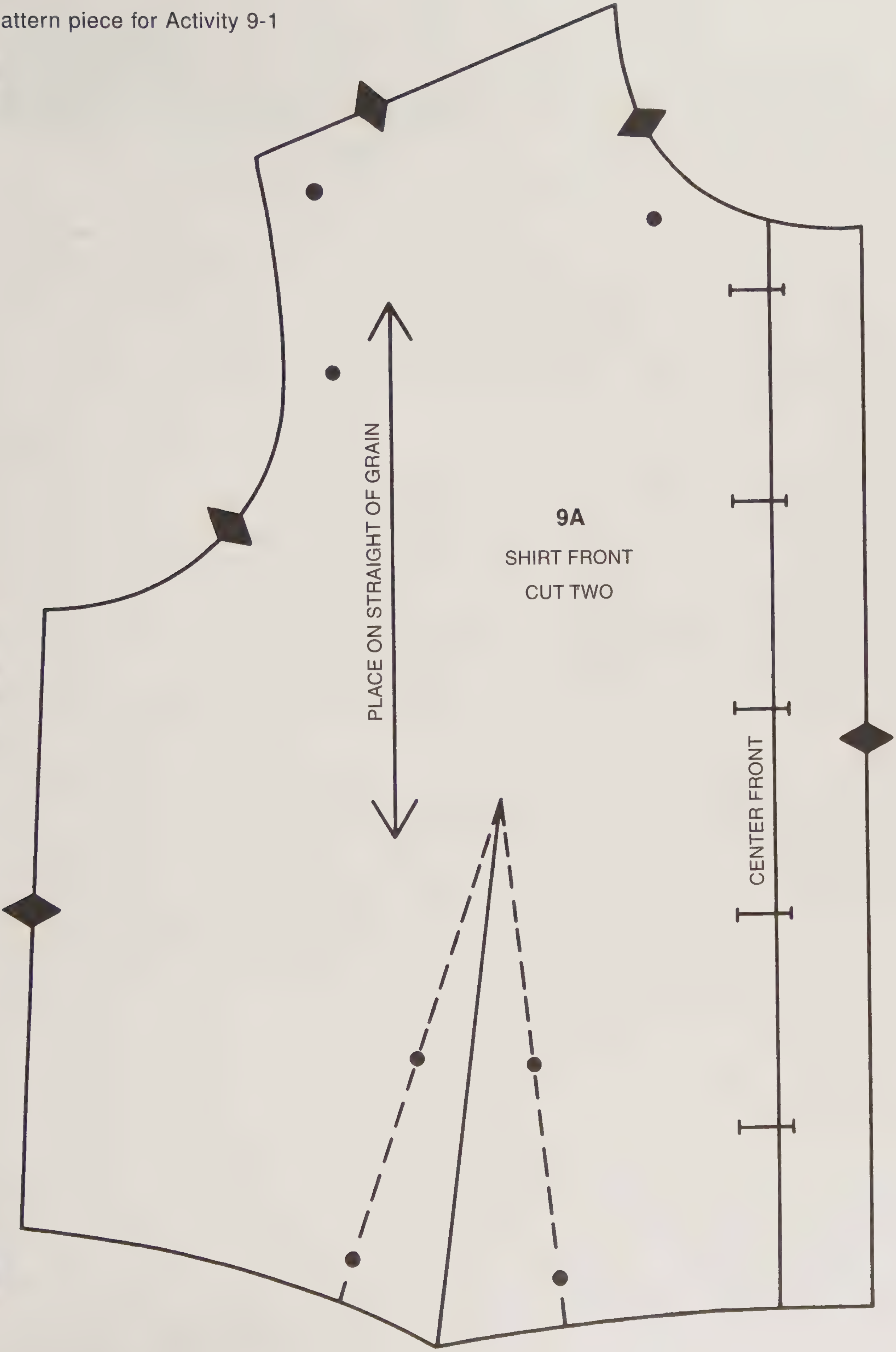
4. ____

____

5. ____

____

Pattern piece for Activity 9-1


PLACE ON STRAIGHT OF GRAIN
9A
SHIRT FRONT
CUT TWO
CENTER FRONT

Lesson 10

Small Equipment and Notions

Objectives

This lesson will help you to

- list the notions, supplies, and small equipment you will need to construct your sewing project.
- identify the equipment that is available for your use and note its location in the classroom.

Words to Know

twill tape
bias tape
hem tape
tape measure
seam gauge
hem gauge
yardstick
shears
scissors
pinking shears
scalloping shears
rotary cutter
pattern weights
tracing paper
tracing wheel
tailor's chalk
fabric marking pen
heat transfer pencil
bobbin
topstitching guide
long-handled tweezers
stabilizer
sharps
ballpoint needles
betweens
needle threader
thimble
beeswax
pincushion
emery bag
seam ripper
bodkin
loop turner
awl
point turner
glue stick
basting tape
fusible web

Gathering Information

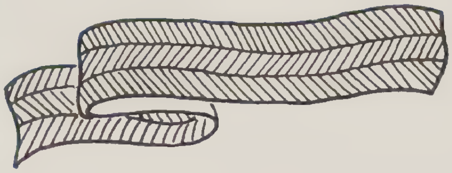
Before you begin to sew, you must collect and organize your supplies and equipment. You will, of course, need to bring your pattern and fashion fabric to class. Be sure to check the pattern envelope to determine all of the fabrics required to complete your project. In addition to your fashion fabric, you may need to purchase lining, interlining, and interfacing fabrics. Also, you will need to bring notions and some small equipment items. Some equipment will be provided by your school. When you have finished this lesson, you will know what you must bring to class and what will be furnished.

Notions

Notions are all of the extra items necessary to complete your project, such as trims, thread, zippers, buttons, lace, and elastics. You will find these items listed on the envelope back. When you shop for notions, look for new products to make sewing fast and easy.

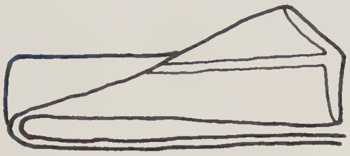
The pattern envelope may not always indicate every notion you will need. As you progress through your sewing project, you may discover a need for additional items. With sewing experience, you will be able to anticipate these needs.

(Continued)



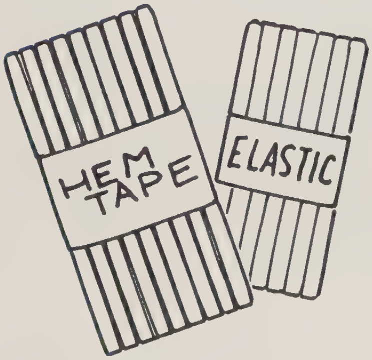
Tapes and bindings. Tapes and bindings are among the items you will have to anticipate needing. There are many types of tapes and bindings. ***Twill tape*** is a sturdy polyester tape used to reinforce areas that may stretch or weaken.

Sheer nylon stay tape is another product that may be used to reinforce areas that may stretch or weaken. It is very light in weight and adds little bulk to seams.



Double-fold ***bias tape*** is cut on the fabric bias and will stretch. Because of its stretch characteristic, it is good for binding curved edges. Never use it in areas requiring stability.

Hem tape and *seam tape* are used to finish hems. If you are working with medium to heavy fabric that will ravel, be sure to use this tape.

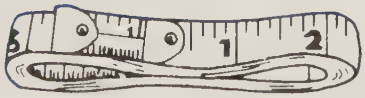


Sheer bias tricot tape is made of nylon and will blend with any fabric without adding bulk. This binding is used to encase seam edges and make casings. It comes in a limited range of neutral colors.

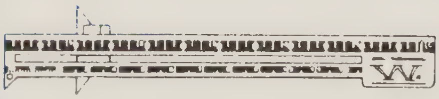
Elastics. There are a wide variety of elastics available. For waistbands, you might want to consider elastic with a drawstring running through the center. For knit sportswear, you could select specially made elastic with four-way stretch. Find the elastic just right for your purpose.

Measuring Equipment

In order for garments and other sewing projects to turn out right, precise measurements are essential. A number of tools can be used to help you measure accurately.

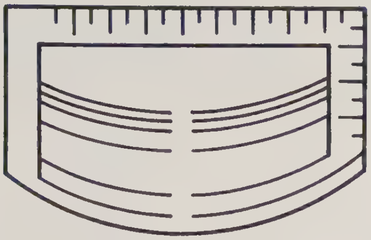


Tape measure. A ***tape measure*** is made from fabric or flexible fiberglass. It is used to take body measurements and measure fabric and pattern pieces. Tapes should be sturdy and nonstretch.



Seam gauge. A ***seam gauge*** is a ruler with an adjustable marker for measuring seam allowances and hems.

(Continued)

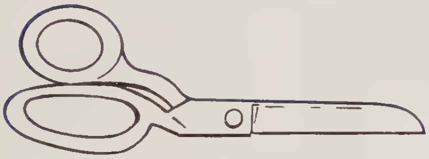


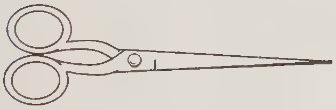
Hem gauge. A ***hem gauge*** is a multipurpose measuring tool. It has a curved, hem-shaped side that is used to mark standard hem depths. It also has a straight side that is used like a ruler.

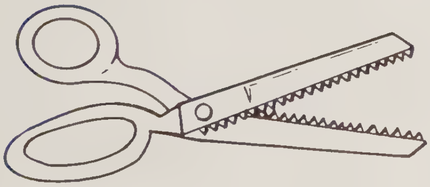
Grid and bias square rulers. *Grid and bias square rulers* are transparent rulers used for precision cutting. Grid rulers come in various lengths and have one-inch gridlines. Bias square rulers come in different size squares with lines marking smaller squares and bias angles. These rulers are ideal for use with a rotary cutter.

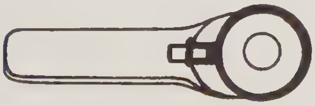
Yardstick. As the name implies, a ***yardstick*** is one yard in length. It can be used for measuring skirt hems and other tasks that require a long, rigid measuring tool.

Cutting Equipment









Sewing projects will include such cutting tasks as cutting out pattern pieces, snipping threads, and clipping seams. Sharp cutting equipment will help you make good, clean cuts.

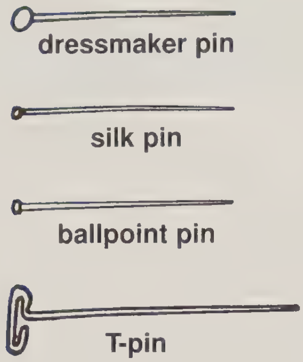
Shears. ***Shears*** are used to cut fabric and should never be used on paper. The handles are different sizes so they will fit your hand.

Scissors. ***Scissors*** have shorter blades than shears and the handles have small, matching holes. They are used to trim seams, clip curves, and open buttonholes.

Pinking shears or scalloping shears. ***Pinking shears*** make zigzag-shaped cuts and ***scalloping shears*** make scalloped cuts. These shears are used to finish raw edges.

Rotary cutter. The round blade of a ***rotary cutter*** turns and cuts fabric as the cutter is pushed along the pattern cutting line. Rotary cutters are available in a small size for most cutting needs and a larger size for heavy fabrics. A special plastic mat is placed under the fabric to prevent damage to the table surface.

(Continued)

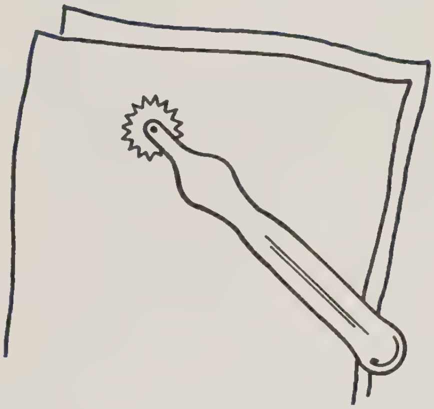


Pins. Pins hold patterns on fabric during cutting and marking. They also temporarily hold layers of fabric together. For easy handling, use plastic- or glass-headed dressmaker pins. For knit fabrics, try ballpoint pins, which have rounded points that slide easily between fibers rather than piercing them. Silk pins are finer pins used for delicate fabrics or easier insertion. T-pins are heavier and are used for pinning heavy fabrics and craft projects.

Pattern weights. ***Pattern weights*** are circular or shaped weights used to hold pattern pieces in place while cutting them out.

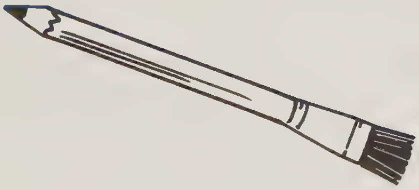
Marking Equipment

You can use various types of marking equipment to transfer pattern symbols to fabric.

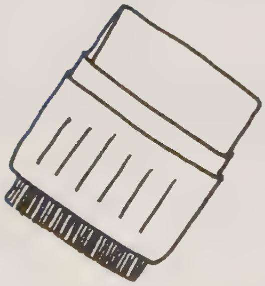


Tracing paper and wheel. ***Tracing paper*** is coated paper that comes in an assortment of colors. Tracing paper is also called marking paper. Use the paper with a serrated edge wheel to mark firmly woven, medium to heavyweight fabrics. Use the smooth edge wheel to mark delicate, lightweight fabrics.

Tailor's chalk or chalk pencil. ***Tailor's chalk*** is available in a limited number of colors. It comes in pencil form and as pieces. Choose a color that will be visible on your fabric. Make chalk marks directly on your fabric. Remove them by brushing before pressing over them.

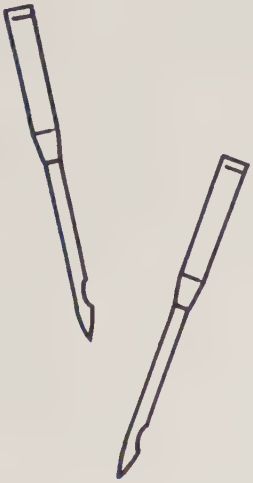


Fabric marking pen. ***Fabric marking pens*** come in several colors. They may be water soluble, fading, or permanent. Water-soluble marks can be removed by wiping with a damp cloth. Fading marks will disappear within several days. Be sure to remove marks before ironing over them or laundering. Heat and some detergents may make the marks permanent. Some fiber contents and fabric finishes may also affect results. Read the package directions. Permanent marks cannot be removed.



Heat transfer pencil. ***Heat transfer pencils*** are used to trace designs that will be decorated with paint, embroidery, or other embellishments. Place traced designs ink side down on fabric. Then press with a dry iron to transfer a permanent, nonbleed design.

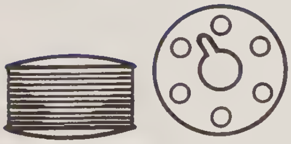
Machine Stitching Equipment



Several tools will be helpful when you begin to construct your project at the sewing machine.

Sewing machine needles. Select needles to fit your machine that are suitable for your fabric. For lightweight fabrics, use needles sizes 9 to 11. For medium fabrics, choose needle sizes 12 to 14. For heavy fabrics, select needle sizes 16 to 18.

Needles come in different types as well as different sizes. Universal point needles are used for most sewing needs. *Ballpoint needles* have a rounded tip that gently separates yarns of knit fabrics without cutting or breaking them. *Microtex needles* have a slim, sharp point designed for sewing microfibers. *Metalfil* and *metallica needles* have a larger eye to accommodate metallic and textured threads. *Double (twin)* and *triple needles* are used for pin tucking, decorative stitching, and stretch seams. *Denim/sharp (jeans) needles* have a sharp point that can pierce multiple layers of thick fabric.



Bobbins. A ***bobbin*** is a small spool used to hold the lower thread in a sewing machine.

Topstitching guides. ***Topstitching guides*** are used to help you neatly place decorative machine stitching on the outside of sewn items. Some stitching guides are clear plastic with short teeth on the underside that grip the fabric. Other guides are printed, adhesive-backed tapes.

Long-handled tweezers. ***Long-handled tweezers*** are bent at an angle that is especially useful for threading the loopers on a serger.

Stablizers

Stabilizers. ***Stabilizers*** provide support for areas being decorated with appliqué, cutwork, decorative stitching, and machine embroidery. They prevent puckering, stitch distortion, thread breakage, and skipped stitches. Selecting the right stabilizer depends on the stitching technique used and the fabric's characteristics and care requirements.

(Continued)

Cut-away stabilizer. This type of stabilizer comes in varying weights as well as an adhesive-backed variety. After stitching, simply trim away excess stabilizer. For dense designs, trim to within ⅛ or 1⁄16 inch of the stitching; and for open designs, to ¼ inch. This stabilizer is a good choice for fabrics that stretch. The stabilizer will prevent stitches from sinking into the fabric and distorting the design.

Tear-away stabilizer. This is a very stable, nonwoven product that comes in varying weights as well as iron-on and adhesive-backed varieties. After stitching, tear away visible portions of stabilizer. Residual bits of stabilizer will remain in the stitching, so avoid using it on sheers or embroidery designs with visible spaces.

It is best used with nonwashable or stable woven fabrics. It is also excellent for dense embroidery designs. Adhesive-backed varieties may be used by hooping the stabilizer, removing the paper backing in the stitching area, and adhering the fabric to the stabilizer.

Water soluble stabilizer (soluble film). This stabilizer dissolves easily in water without leaving a residue on the finished piece. After stitching, trim away excess stabilizer and then soak the fabric in water for several minutes, or iron the fabric between damp paper towels or a press cloth.

Water-soluble stabilizer is available in a variety of weights, suitable for use on knits and other medium to lightweight fabrics. It is slightly less stable than tear-away and iron-away stabilizers. This stabilizer must be used with washable fabrics and can be placed either on the front or back. Use it on the right side of pile or textured fabrics to keep the stitches from sinking and to prevent the presser foot from getting caught in the pile.

Heat soluble stabilizer. This is a special heat-sensitive woven fabric that disintegrates with a dry, hot iron, then brushes away easily. A press cloth may be used.

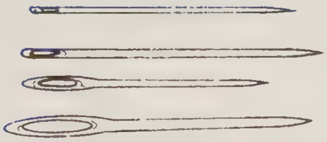
(Continued)

This stabilizer is suitable for medium to lightweight fabrics. It is often used for embroidery on sheer fabrics that are nonwashable or too delicate for tear-away stabilizers. It also serves as a foundation for making lace. Simply attach it to the wrong side of the fabric, then after stitching and ironing, only the needlework is left.

Liquid stabilizer. A wash-away stabilizer is sprayed on washable fabric to stiffen it. Allow the stabilizer to dry before stitching. A hair dryer may be used to speed drying. Iron the fabric with a dry iron just before sewing to remove any remaining moisture. Use a press cloth to prevent scorch marks. After stitching simply rinse or wash out the stabilizer. Leaves no residue when washed away.

This stabilizer may be used for sheers, lightweight fabrics, and stretchy fabrics to eliminate puckering during machine stitching. It is especially good for embroidery, appliqués, and pin tucking. It also serves as a temporary bonding agent for appliqués, quilting, and hemming.

Hand Stitching Equipment



Securing hems and attatching buttons are just two of the hand stitching tasks that might require the following equipment.

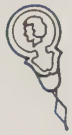
Needles. A wide variety of needles are available. For instance, there are special needles for embroidery, leather work, beading, and darning. The needle you select will depend on the task, size of thread, and the fabric being used. Generally, finer threads and delicate fabrics require sharper, more slender needles. Some types of needles come in a range of sizes. The smaller the size, the thicker and longer the needle will be. Select an assorted package of needles so you will have a variety of sizes available for different sewing tasks.

Sharps are used for all-purpose sewing. They are medium length with small, rounded eyes.

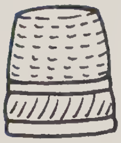
Ballpoint needles are for all-purpose sewing on knits. They have a special rounded tip that enables the needle to slide between threads rather than piercing them.

(Continued)

Betweens are short needles with small, rounded eyes. They are used for handwork and quilting.

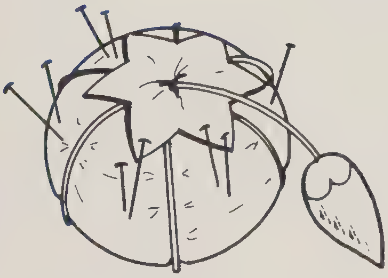


Needle threader. A ***needle threader*** is a small disk with a loop of wire attached. The wire loop is inserted through the eye of the needle. Thread is passed through the loop. The thread is drawn through the eye of the needle when the threader is pulled back out of the eye.



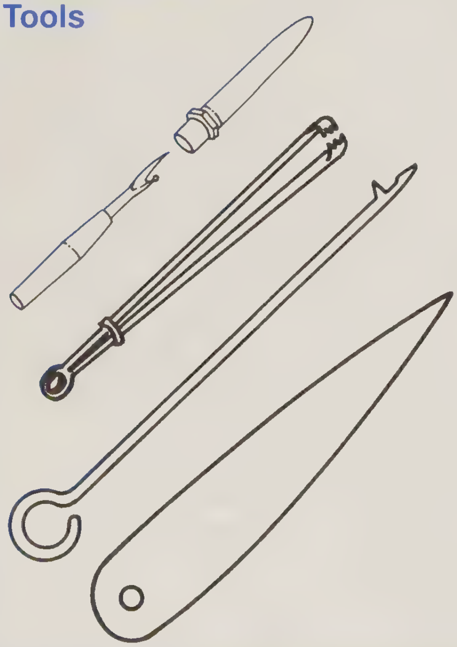
Thimble. A ***thimble*** helps protect the middle finger while guiding a needle, especially through dense or heavy fabric. Plastic and metal thimbles are available in sizes 6 to 12. Some animal skin thimbles are "one size fits all." Select a size that gives you a snug fit.

Beeswax. ***Beeswax*** is used to coat sewing thread so it will not tangle as you stitch.



Pincushion with emery bag. A ***pincushion*** stores pins so you can grab them one at a time. An ***emery bag*** is often attached to a pincushion. It is used to sharpen pins and needles by repeatedly jabbing them into the bag.

Timesaving Tools



Some nonessential sewing tools can save you time when working on a project.

Seam ripper. A ***seam ripper*** is a small tool used for ripping out stitching.

Bodkin. A ***bodkin*** is an instrument with a large eye or special teeth clamp at one end. It is used for inserting elastic or drawstrings in casings.

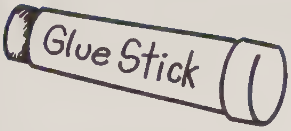
Loop turner. A ***loop turner*** is a long, slim wire with a latch hook at one end. It is used to turn tubing or cording to the right side.

Awl. An ***awl*** is a sharp, pointed tool used for making eyelets and round holes.

Point turner. A plastic or wooden ***point turner*** can be used to push out points, such as those on collars and cuffs.

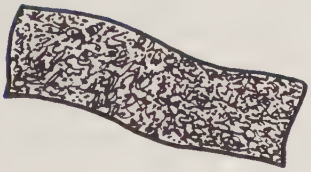
Construction Aids

Some time saving products allow you to complete certain construction steps more easily.



Glue stick. A ***glue stick*** is solid glue used for pinless basting. Use it in small dots rather than long slashes.

Basting tape. ***Basting tape*** is double-faced tape used for basting fabric pieces together. You may stitch through the tape. The tape is usually water soluble and disappears when the garment is laundered.



Fusible web. ***Fusible web*** is a nonwoven material that bonds two layers of fabric together when steam and heat are applied. Use it to secure hems, pockets, and trims until permanently stitched. The webbing is available by the yard or in precut strips.

Fusible thread. *Fusible thread* is a polyester thread twisted with a fusible fiber. When touched with a steam iron, the fusible component melts, leaving the polyester thread intact. Use it in the bobbin of a conventional machine or lower looper of a serger. It is helpful for matching plaids and positioning zippers, patch pockets, appliqués, and trims. Fusible thread may also be used to secure seam allowances, hems, or facings. It is pliable and withstands washing and dry cleaning.

Dissolvable basting thread. *Dissolvable basting thread* is used to hand or machine baste garment areas together until they are permanently stitched. After stitching, use water or steam to dissolve the thread.

Liquid seam sealant. *Liquid seam sealant* is a liquid glue that prevents fraying or raveling. It is best used in small areas, such as the end of a slash and the points of collars and cuffs, or to secure serged seam ends. It can stiffen and darken fabric so use it with care.

Paper-backed fusible transfer paper. *Fusible transfer paper* bonds fabric to fabric. Apply it to a fabric with a hot, dry iron, then let cool. Remove the paper backing and position it on another fabric with fusing material down. Press, following manufacturer's instructions.

Name ______________________________

Date ________________ Period __________

Activity 10-1: Locating Materials

Find out which of the items listed in this lesson are provided in your classroom and list them below. Then list those items that you must provide. Use these lists when gathering materials for projects.

Equipment found in class

Equipment I must provide

Name ______________________________

Date ________________ Period __________

Activity 10-2: Evaluating Learning

Assess your understanding of small equipment and notions by answering the following questions.

1. Define the following words:

bias tape ______________________________

emery bag ______________________________

fusible web ______________________________

pinking shears ______________________________

tracing paper ______________________________

2. Which of the following items would be considered notions? (Check the correct answers.)

____ pins
____ fabrics
____ thread
____ lace trim
____ awl
____ zipper
____ hem tape
____ chalk pencil
____ rick-rack
____ buttons
____ seam ripper
____ appliqués

3. Name three fabric marking tools that can be purchased by the consumer.

____

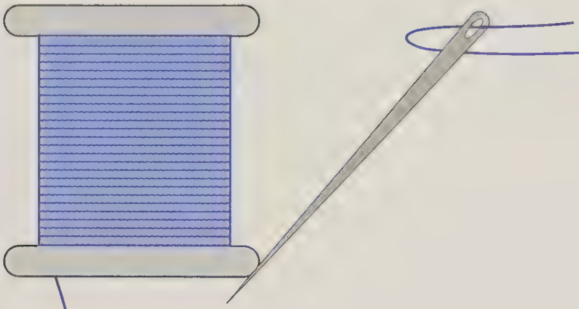
4. Name three types of stabilizers and explain when you might use each.

A. stabilizer 1: ______________________________

B. stabilizer 2: ______________________________

C. stabilizer 3: ______________________________

notes



Lesson 11

Operating the Sewing Machine

Objectives

This lesson will help you to

- locate and explain the function of various sewing machine parts.
- wind the bobbin and thread the sewing machine.
- operate a sewing machine.
- compile a checklist to follow when resolving sewing machine problems.

Words to Know

bobbin case
bobbin winder
drop feed button
feed dog
hand wheel
needle clamp screw
power and light switch
presser foot
presser foot lever
presser foot screw
pressure regulator
reverse stitch control
spool pin
stitching guidelines
stitch length control
stitch selector
stitch width control
take-up lever
tension dial and regulator
thread guides
throat plate

Gathering Information

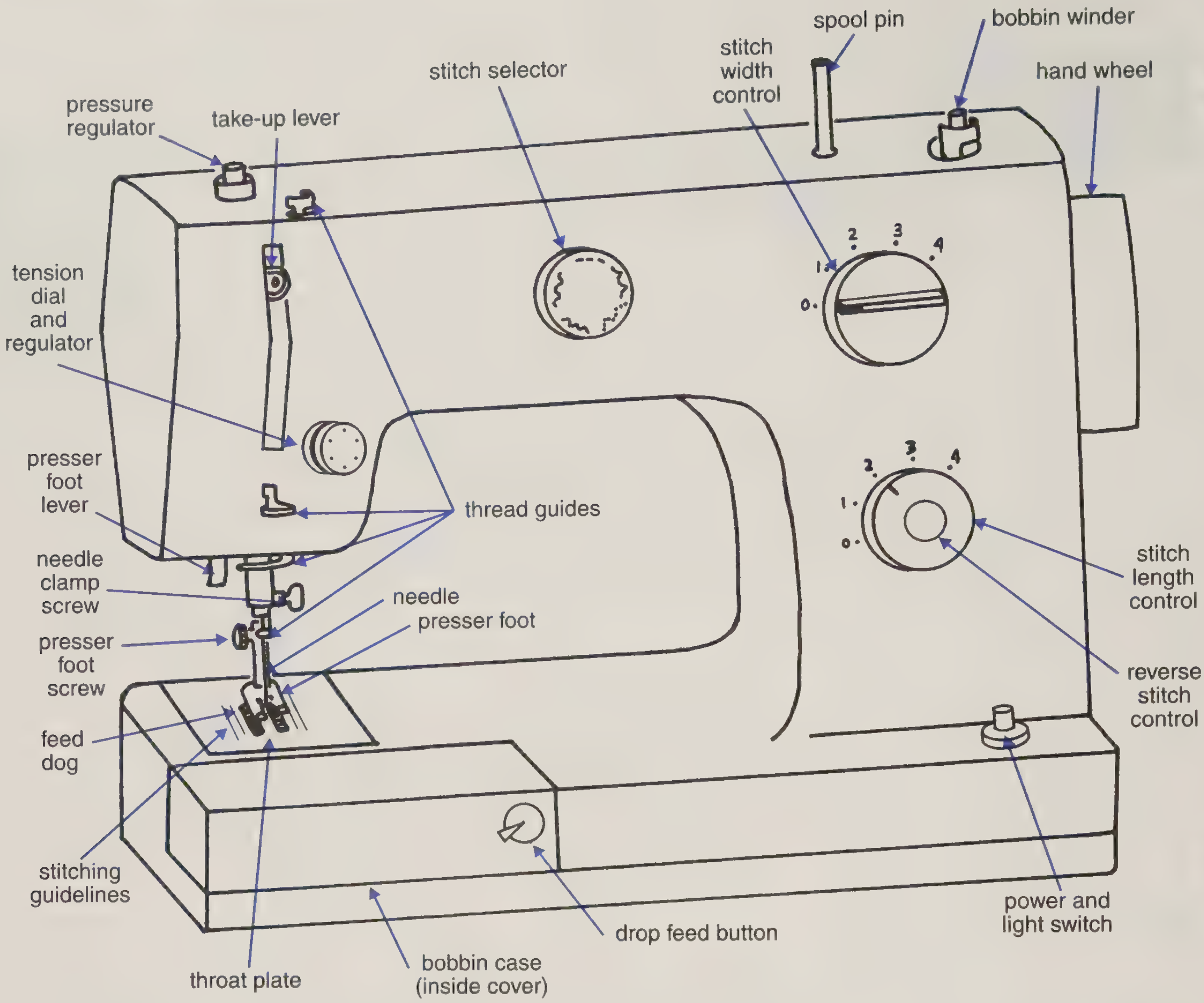
The sewing machine is the most important piece of equipment you will use to construct your project. Correct use of the sewing machine is essential to trouble free sewing. This lesson will assist you in learning the basics of machine operation. It will also help you identify the causes and solutions to annoying sewing machine problems.

Sewing Machine Parts

There are many different models of sewing machines. Some are computerized and have information-display screens. Adjustments in stitch tension, stitch length, stitch width, and pressure are made with a simple touch to the screen. When adjustments such as changing the foot or adding an embroidery unit are made, the display screen shows what needs to be done. Most sewing machines are conventional machines, requiring manual adjustments.

Each sewing machine operates somewhat differently. When unfamiliar with a sewing machine, always begin by reading its manual.

(Continued)


spool pin
bobbin winder
hand wheel
stitch width control
stitch selector
pressure regulator
take-up lever
tension dial and regulator
presser foot lever
thread guides
needle clamp screw
needle
presser foot
presser foot screw
feed dog
stitching guidelines
throat plate
bobbin case (inside cover)
drop feed button
power and light switch
stitch length control
reverse stitch control
0
1
2
3
4

Even though sewing machines vary, there are some similarities between all models. Following is a list of the names and functions of basic parts found on most sewing machines. As you read about each part, locate it on the machine diagram included in this lesson.

Bobbin case. Holds the bobbin and applies tension to the bobbin thread, which appears on the underneath side of the fabric.

Bobbin winder. Winds the thread onto the bobbin.

Drop feed button. Lowers the feed dog so that the fabric will not be fed under the presser foot. This button is generally used when making buttonholes or doing machine embroidery.

Feed dog. Moves the fabric under the presser foot.

(Continued)

Hand wheel. Turns to raise or lower the needle and thread take-up lever.

Needle clamp screw. Holds the needle in place.

Power and light switch. Turns on the machine.

Presser foot. Holds the fabric in place as the machine stitches.

Presser foot lever. Raises and lowers the presser foot.

Presser foot screw. Holds the presser foot in place.

Pressure regulator. Adjusts the amount of pressure the presser foot applies to the fabric.

Reverse stitch control. Allows the machine to backstitch.

Spool pin. Holds the spool of thread.

Stitching guidelines. Keep edge of fabric aligned so seam allowances will be uniform in width.

Stitch length control. Adjusts the number of stitches per inch.

Stitch selector. Changes the type of stitches.

Stitch width control. Adjusts the width of zigzag and other two-dimensional stitches.

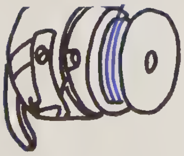
Take-up lever. Pulls the thread from the spool and through the tension regulator.

Tension dial and regulator. Adjusts and applies tension to the thread so that it feeds at a constant rate.

Thread guides. Guide the thread from the spool to the needle.

Throat plate. Covers the area around the needle.

Winding and Inserting the Bobbin



Check the machine manual for the correct method of winding the bobbin. The bobbin thread must be wound smoothly and at a moderate speed to prevent stretching the thread. If the thread is stretched by winding the bobbin too fast, stitches will pucker. This is very important for decorative stitching or machine embroidering.

Follow the correct procedure for inserting the bobbin into the bobbin case, and the bobbin case into the machine. The thread generally should pull off the bobbin clockwise as it is dropped into the bobbin case. If the bobbin thread does not pull off in the correct direction, stitching problems can occur.

Changing the Machine Needle

The sewing machine needle can be damaged by sewing over pins or on thick, dense, or metallic fabrics. If the needle is burred, blunted, or bent, it can snag fabric, skip stitches, or cause other problems. Check the needle before you begin sewing. If it is damaged, insert a new needle. You may wish to begin each new project with a new needle.

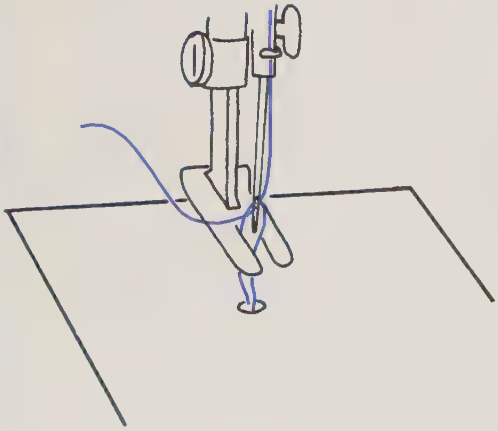
To replace the needle, unscrew the needle clamp screw and remove the old needle. Insert the new needle into the needle clamp as far as it will go, turning the flat side of the shank away from you. If the needle is not inserted correctly, the machine will not stitch properly. After correctly positioning the needle, tighten the needle clamp screw.

Threading the Sewing Machine

The sewing machine must be properly threaded or it will not stitch correctly. Follow the threading guide illustration in the manual for your sewing machine.

One common threading problem is an incorrectly threaded needle. Always thread the needle from the side of the last thread guide.

Pulling Up the Bobbin Thread



Most computerized sewing machines will automatically pull the bobbin thread through the needle hole in preparation for stitching. Refer to the machine manual for specific directions. If your machine does not have this feature, you must manually pull the bobbin thread through the needle hole before beginning to stitch. If the thread is not pulled up, it will knot as the first stitch is taken.

Pull the thread up through the needle hole by holding onto the top thread. Then lower the needle into the needle hole using the hand wheel. As you turn the hand wheel, the needle will enter the needle hole. Then, as the needle rises, it will pull the bobbin thread up. Pull both the top thread and the bobbin thread to the back of the machine. Be sure the threads are between the toes of the presser foot.

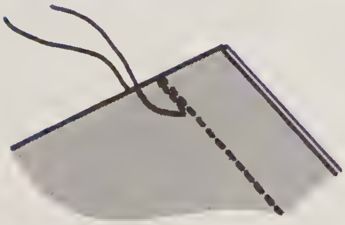
Machine Stitching

As you begin stitching, there are two important steps to follow that will prevent sewing problems. First, always start with the take-up lever at the highest point. This will prevent the thread from coming out of the needle as you begin to stitch. Second, hold on to the bobbin and top threads as you take the first stitch. This will prevent the threads from knotting under the fabric as you begin stitching. If you have a computerized machine these procedures will be done automatically by the machine.

To stitch using a conventional machine, follow these steps:

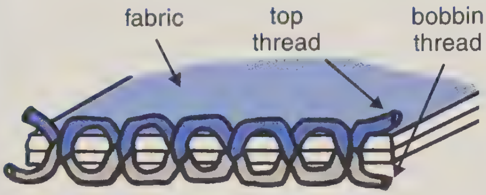
1. Place the fabric under the presser foot. Line up the fabric edge with the desired stitching guideline on the throat plate.
2. Using the hand wheel, lower the needle into the fabric.
3. Lower the presser foot onto the fabric.
4. Stitch by pressing lightly on the foot or knee control. As you make your first stitch, gently hold on to the bobbin and upper threads. Hold the fabric lightly and guide it with your right hand. The feed dog will move the fabric under the presser foot. When you stop stitching, stop with the needle and take-up lever at the highest position. You will then be ready for the next row of stitching.

Backstitching

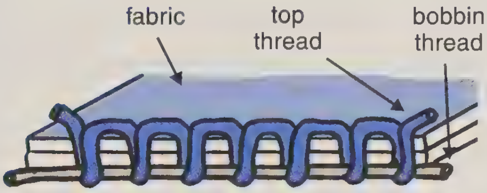


Backstitching is used to lock the stitches at the beginning and end of the row. Check your machine manual for the location of the reverse mechanism on your machine. To backstitch, lower the needle into the fabric ¼ inch from the edge. Put the machine in reverse and make three or four backstitches. Take the machine out of reverse and sew forward. Sew to the end of the fabric. Put the machine in reverse and backstitch three or four stitches. Lift the presser foot. Clip the threads.

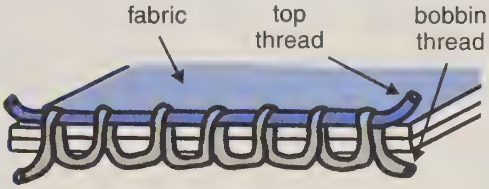
Adjusting Machine Tension



balanced tension



upper tension too loose



upper tension too tight

The tension regulator is used to adjust the thread tension so that a balanced stitch will be formed. A balanced stitch is important for a sturdy, long-wearing seam. If the stitch is not balanced, one thread will lay along the surface of the fabric. This thread can easily be pulled out.

Two thread tension regulators are found on the machine. The upper tension regulator applies tension to the top thread. Tension on the bobbin thread is applied by the bobbin case. Generally, you will not need to concern yourself with the bobbin case tension. However, you should become familiar with adjusting the upper tension.

Locate the tension regulator on your machine. If the regulator is turned to a higher number, tension on the top thread is increased. If the regulator is turned to a lower number, tension is decreased.

When stitching, if the bobbin thread lies along the surface of the fabric, the upper tension is too loose. Turn the tension regulator to a higher number to increase the upper tension and form a balanced stitch.

If the top thread in a row of stitching lies along the surface of the fabric, the upper tension is too tight. Turn the tension regulator to a lower number to decrease the upper tension and form a balanced stitch.

Adjusting Stitch Length

For most straight stitching, the machine should be set at 10 to 15 stitches per inch. This stitch length results in a sturdy, long-wearing seam. Stitch length will need to be adjusted depending on the weight and texture of the fabric. When sewing on heavy or highly textured fabrics, increase stitch length. For light, sheer fabrics, decrease stitch length.

Other situations will require you to adjust stitch length. For instance, basting and gathering stitches are generally made using six stitches per inch. For reinforcement stitching, stitch length is usually set at 12 to 15 stitches per inch. Stitch length adjustments will also be necessary when using zigzag or serge stitches.

Before stitching on your garment, test stitch length on a scrap of garment fabric. Adjust the stitch length according to fabric needs.

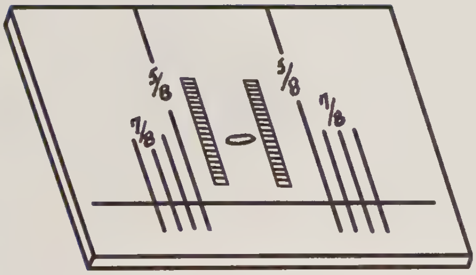
Adjusting the Pressure Regulator

The presser foot holds the fabric close to the feed dog. The feed dog, in turn, moves the fabric through the sewing machine. If the pressure on the presser foot is not adjusted correctly, the fabric will not feed through the machine properly.

Most sewing machines have a means of adjusting the pressure applied to the presser foot. This allows you to adjust the pressure for different fabrics. Sewing on heavy fabrics or through many layers of fabric requires a light pressure. Sewing on lightweight fabrics requires a firmer pressure. Computerized sewing machines automatically adjust pressure for specific fabric choices or as the machine stitches from thick to thin layers of fabric.

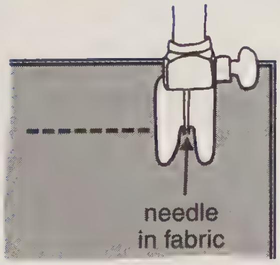
Read the manual for your machine. Locate the pressure regulator. Set the regulator as recommended in the manual.

Stitching Guidelines



Most sewing machines have stitching guidelines on the throat plate. If your sewing machine does not have these guides, you may make your own. Simply place tape on the throat plate at the desired location. The ⅝-inch guideline is used for stitching most seams. For stitching done ¼ inch from the edge of the fabric, the presser foot can often be used as a stitching guide.

Turning a Corner



Stitching a square corner is an important machine technique to learn. Begin by stitching to within ⅝ inch of the fabric edge. Stop with the needle inserted into the fabric. Lift the pressure foot and pivot the fabric. Leaving the needle down prevents the fabric from shifting as the presser foot is lifted. If the fabric shifts, the corner stitch will be distorted. After pivoting the fabric, resume stitching in the new direction.

Stitching Buttonholes

Many sewing machines have a buttonhole mechanism built into the machine. Other machines have a buttonhole attachment. Check your machine manual for directions on how to make buttonholes.

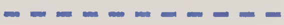
The stitch length control adjusts the distance between the stitches. If the stitches are too close together, the thread will knot. To avoid this problem, adjust the stitch length control accordingly.

You will need to make several other adjustments to your machine when making buttonholes. You will need to use the drop feed button to lower the feed dog. The regular presser foot will need to be replaced with a special buttonhole presser foot. The stitch width control will also need to be adjusted.

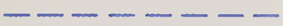
Always make several practice buttonholes on fabric scraps that duplicate the fabric layers of your garment. This will allow you to make adjustments before stitching on the garment.

Machine Stitches

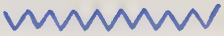
Most sewing machines can make a variety of stitches to meet a range of sewing needs. The following list includes descriptions and illustrations of several common machine stitches.



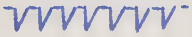
Straight stitch. This is the most frequently used stitch. The length of the stitch can be adjusted using the stitch length control. For most fabrics, the machine will be set at 10 to 15 stitches per inch.



Basting stitch. The basting stitch is a long, straight stitch. It is used to temporarily hold several layers of fabric together. It is also used to make rows of gathering stitches. For machine basting, the stitch length control is generally set at six stitches per inch.

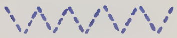


Zigzag stitch. The zigzag stitch is used to overcast seam edges and to make buttonholes. Check your machine manual for the correct settings for this stitch. The zigzag stitch can be adjusted by using both the stitch length and stitch width controls.

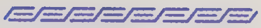


Pine (serge) stitch. This is an excellent stitch for overcasting seam edges. Adjustments can be made in stitch width as well as number of stitches per inch. Check your machine manual for the correct machine settings.

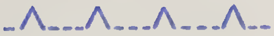
(Continued)



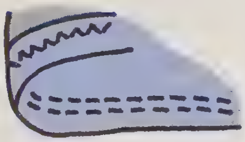
Stretch (multistitch) zigzag stitch. This stitch is used on stretch knit fabrics. The stitch forms a seam that will stretch as the fabric stretches. Check your machine manual for the correct machine settings for this stitch.



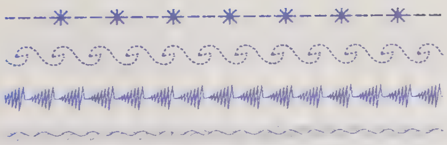
Stretch stitch. This stitch is used on stretch knit fabrics. It allows the seam to stretch as the fabric stretches. This stitch is almost impossible to remove without damaging the fabric. Use this stitch only if you are sure the stitching will not have to be removed.



Blind hem stitch. This stitch is used for making a machine blind hem. Adjust the machine controls as directed in your machine manual. Practice this stitch before using it on a garment. If the correct technique is not used, stitches will show on the right side of the garment. (See Lesson 23, "Hemming Methods," for a description of how to make a machine blind hem.)



Twin-needle stitch. This stitch is used to construct seams and hems on knits, make decorative topstitching, and make pin tucking. The stitch requires the use of a special twin needle. Twin needles are available in different sizes and with varying distances between the needles. Two spools of thread are used. The needles share one bobbin thread. As the stitches are formed, the bobbin thread is carried from one needle to the other. A zigzag stitch is formed on the reverse side of the fabric. To prevent the two upper threads from tangling, place spools so they unwind in opposite directions. The left spool should unwind from behind and the right spool should unwind from the front. Not all machines are capable of using a twin needle. The machine must zigzag and thread from front to back (not from the side). Test your machine's ability to use a twin needle by carefully turning the hand wheel to see if the needles have sufficient clearance.



Decorative stitches. Some sewing machines can make a variety of decorative stitches. Check your machine manual to determine the stitch capability of your machine.

Machine Embroidery

Many computerized sewing machines have built-in embroidery stitches. Simply attach the embroidery unit and appropriate foot, then select from the many designs offered. You may even be able to combine, rotate, or mirror designs. Some machines provide color-touch screens for viewing and manipulating designs. Additional memory cards or disks may be purchased to give you even greater design options. You can also use your computer to customize images and even acquire designs via the Internet.

Digitizing is also possible. This means you can create your own designs from clip art, drawings, and photos. With a computer and appropriate software, you draw or scan a design, adjust embroidery on screen, and transfer your creation to disk or directly download it to the sewing machine.

Choosing the design. Fabric weight and embroidery weight should relate closely. Just as you choose the right weight of interfacing for fashion fabric, you must choose the right weight of design for the fabric. Use lower-density designs and materials for lightweight fabrics and higher-density designs and materials for heavier fabrics. Many factors influence design density, such as the size of the design, thread coverage, thread size, and stabilizer used. Choose designs carefully. For example, if your fabric is lightweight, you will want to avoid large designs, dense stitching, and heavy threads that would make the fabric stiff.

Choosing the stabilizer. Almost every fabric needs some type of stabilization to prevent puckering, stretching, and skipped stitches during machine embroidery. Stabilizers make fabric heavier and firmer, which results in more even stitching and fewer skipped stitches.

Hooping the fabric. An embroidery hoop is necessary for most machine embroidery. The fabric must be held completely taut throughout the entire stitching process. A hoop is used for this purpose. Most computerized machines with embroidery units are sold with a special machine embroidery hoop designed to work with the machine. Hoop the fabric with a stabilizer until very taut.

(Continued)

Selecting thread. Many machine-embroidery threads are available to enhance designs. Try silky rayons, metallics, variegated, or multicolored threads. Be sure to use thread specifically designed for machine embroidery. It is twisted looser than all-purpose sewing thread, allowing it to spread and cover the fabric better. It is not as strong and should not be used for garment construction. Most available embroidery designs are planned for a 40-weight thread. Experiment with lighter or heavier weights depending on your embroidery project. To help cut down on thread bulk, use a fine thread especially made for this purpose in the bobbin.

Selecting a clear or smoke monofilament nylon thread will eliminate the need to change the bobbin with each spool color change. Remember to adjust the machine needle type and size to accommodate your thread choice.

Testing the stitch. The best way to ensure you have selected the best design style and proper stabilizer, thread, needle, and hooping process is to test-stitch your design. Practice on fabric left-over from your project or something similar.

Embroidery stitching. To make embroidery stitches, the machine moves the hoop in a multitude of directions while the needle remains stationary. Before filling in the embroidery design, the machine will produce foundation stitches. These stitches secure the stabilizer to the fabric and help prevent distortion during decorative stitch formation. Foundation stitches frequently outline or pad a design. As the machine stitches, it will automatically stop when a thread color change is required.

Machine Care

Proper care of your sewing machine will result in fewer machine problems. Use a small brush to remove the lint around the bobbin area of the machine. Do this frequently.

(Continued)

Many, but not all, conventional sewing machines need oiling so always check the operating manual carefully for directions on how and when to oil. Newer machines, however, are permanently infused with oil and require little or no oiling. Computerized machines should never be oiled.

Resolving Machine Problems

Nothing can be more frustrating than a sewing machine that does not operate correctly. Most sewing machine problems are not serious. Problems can often be traced to incorrect threading, needle insertion, or bobbin and bobbin case insertion. The following chart will help you resolve these simple sewing machine problems for yourself.

Problem	Solution
Needle comes unthreaded when beginning a row of stitching.	Be sure the take-up lever is at the highest point when beginning to stitch.
Thread knots up on the underside of the fabric when beginning to stitch.	Hold thread ends under and to the back of the presser foot when beginning to stitch.
The bottom thread lies along the surface of the fabric. The stitches are not balanced.	Tighten the top tension.
The upper thread lies along the surface of the fabric. The stitches are not balanced.	Loosen the top tension.
When sewing with lightweight fabric, the fabric catches and is pulled down into the needle hole of the throat plate.	Use a straight stitch throat plate which has a smaller needle hole. When using this throat plate, be sure to straight stitch only.
Stitches are buried in the fabric.	Check stitch length on a fabric scrap before sewing on a garment. Stitch length will need to be adjusted from fabric to fabric. The thicker the fabric, the longer the stitch length will need to be.
The sewing machine jams and makes a knocking noise. Thread is caught in the shuttle.	Remove the bobbin case and clean out any threads.
Machine does not sew.	Check to see if the machine is in gear and is plugged into an electrical outlet.
Machine skips stitches. Note: Knit fabrics may cause the machine to skip stitches. This is because the stretch and density of the fabric does not allow the needle to enter the fabric properly. Also, many knits have a chemical residue that leaves a sticky coating on the needle preventing it from penetrating the fabric properly.	Check to see if the needle is inserted correctly. Make sure the needle is the right size for the fabric. If sewing on knit fabrics • use a ballpoint needle • use a straight stitch throat plate (this will prevent the fabric from stretching as the needle penetrates it.) • set pressure regulator at normal to heavy to hold fabric in place • launder knits to remove any chemical residue • balance machine tension
Fabric does not move.	Be sure the feed dog is up. Be sure the presser foot is down. Increase the pressure on the presser foot. Check to see if thread is knotted under the fabric.
The upper thread breaks.	Make sure the machine is properly threaded. Loosen the upper tension.
The bobbin thread breaks.	Make sure the bobbin is threaded properly. Check to see if thread is caught in the shuttle.
Stitching puckers.	Make sure the needle is not bent or blunt. Check the thread tension. Check the pressure regulator.
The needle breaks.	Make sure you are using the correct needle size and that it is inserted correctly. Tighten the presser foot. Avoid pulling on the fabric as you sew. Avoid stitching over pins.

Name ______________________________

Date ________________ Period __________

Activity 11-1: Identifying Sewing Machine Parts

At the bottom of this page is a list of basic sewing machine parts. Notice the headings. They will help you learn the functions of the various parts.

Your teacher will give you a diagram of the sewing machine you will be using. Attach the diagram in the space provided below. Locate on the diagram each of the parts listed at the bottom of the page. To help you do this, refer to the section on "Sewing Machine Parts" in this lesson.

Note: Some machines may not have all of the following parts.

Threading
- thread guides
- take-up lever
- tension dial and regulator
- spool pin

Pressure
- pressure regulator
- presser foot
- presser foot lever
- presser foot screw

Needle
- needle clamp screw
- throat plate

Feeding
- feed dog
- drop feed button

Miscellaneous
- power and light switch
- hand wheel

Bobbin
- bobbin case
- bobbin winder

Stitch Control
- reverse stitch control
- stitching guidelines
- stitch length control
- stitch width control
- stitch selector

In addition to the parts listed above, your teacher may help you locate the following:

- bobbin case tension screw
- foot or knee control
- hand wheel knob
- sewing light
- thread cutter

Name ________________________________

Date ____________________ Period ____________

Activity 11-2: Practicing Basic Machine Operation

Supplies needed:

- thread
- scissors
- fabric swatches
- sewing machine manual
- sewing machine
- bobbin
- machine needles

The left-hand column of the following chart lists various tasks required in basic sewing machine operation. Where necessary, your teacher will tell you the correct machine settings to write in this column. Demonstrate your ability to perform each task. Then provide the sign of task performance requested in the right-hand column. This may require you to make a sample or answer a question. You may be required to obtain the signature of someone who observed you performing the task. In this case, your teacher will tell you who is to observe your task performance.

Task	Sign of Task Performance
Threading the machine Wind the bobbin and insert correctly in the sewing machine.	Signature of observer: ______________________________
Thread the sewing machine. Be sure to pull up the bobbin thread if necessary for machine type.	Signature of observer: ______________________________
The needle Remove the needle. Inspect it for a blunt end and replace it correctly.	Signature of observer: ______________________________
Straight stitching and reverse For this stitch, set the machine at: ______________________________ ______________________________ ______________________________ Find the reverse mechanism. Practice straight stitching, beginning and ending each row of stitching with several reverse stitches. For conventional sewing machines, remember to A. Start with the take-up lever at the highest point to prevent the thread from coming out of the needle when you begin stitching. B. Keep threads pulled to the back of the presser foot when beginning stitching to prevent the thread from knotting.	Make a straight stitch sample with reverse stitching at the beginning and end of your row of stitches.
Seam guidelines Find the stitching guidelines on the throat plate. Most seams are stitched ⅝ inch from the edge of the fabric.	What do you use as a stitching guide? ______________________________
Sometimes you will need to stitch ¼ inch from the edge of the fabric.	What do you use as a stitching guide? ______________________________

(Continued)

Name ____

Task	Sign of Task Performance
Turning a corner Stitch to a square corner on a fabric swatch. When you reach the corner, leave the needle down in the fabric. Lift up the presser foot and turn the fabric. Continue to sew.	Is the corner square? ______________________________ What happens when you do not leave the needle in the fabric when you turn the corner? ________________
Zigzag stitch ∧∧∧∧∧∧∧∧∧∧ For this stitch, set the machine at: ____ ____ ____ Adjust the zigzag stitch by first changing the stitch length control and then the stitch width control.	Make a zigzag stitch sample. What happened with each adjustment? ______________ ____ ____ ____
Basting stitch — — — — — — — For this stitch, set the machine at: ____ ____ ____ Adjust the stitch length control to a different setting.	Make a basting stitch sample. What happens? The larger the number, the ________ the stitches. What happens when you pull on the top thread of a row of basting stitches? ____________________ ____ ____

Name ______________________________

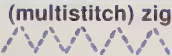
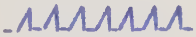
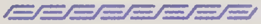
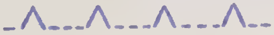
Date ________________ Period __________

Activity 11-3: Practicing Advanced Machine Operation

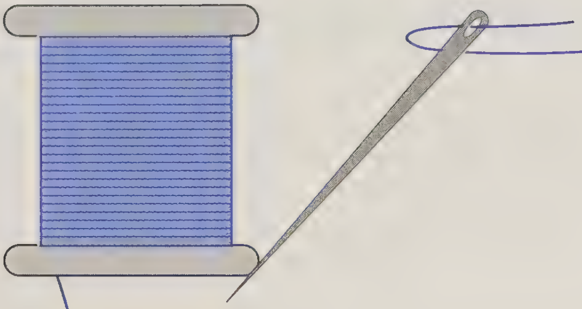
Supplies needed:

- thread
- scissors
- fabric swatches
- sewing machine manual
- sewing machine
- bobbin
- machine needles
- buttonhole foot
- blind hem foot
- decorative stitch attachments

The left-hand column of the following chart lists various tasks required in advanced sewing machine operation. For each task, your teacher will tell you the correct machine settings to write in this column. Demonstrate your ability to perform each task. Then provide the sign of task performance requested in the right-hand column.

Task	Sign of Task Performance
Stretch (multistitch) zigzag stitch  For this stitch, set the machine at: ___________ ___________ ___________	Make a stretch zigzag sample.
Pine (serge) stitch  For this stitch, set the machine at: ___________ ___________ ___________	Make a pine stitch sample.
Stretch stitch  For this stitch, set the machine at: ___________ ___________ ___________	Make a stretch stitch sample. When you stretch the fabric after stitching with this stitch, what happens? ___________
Blind hem stitch  Change to blind hem foot. For this stitch, set the machine at: ___________ ___________ ___________	Make a blind hem stitch sample. (Your teacher may also ask you to refer to Lesson 23 to prepare a sample of an actual blind hem.)
Buttonhole Change to buttonhole foot and appropriate attachments. Set machine at: ___________ ___________ ___________	Make a sample buttonhole.
Decorative stitches For decorative stitches, set the machine at: ___________ ___________ ___________	Make samples of several decorative stitches.

notes

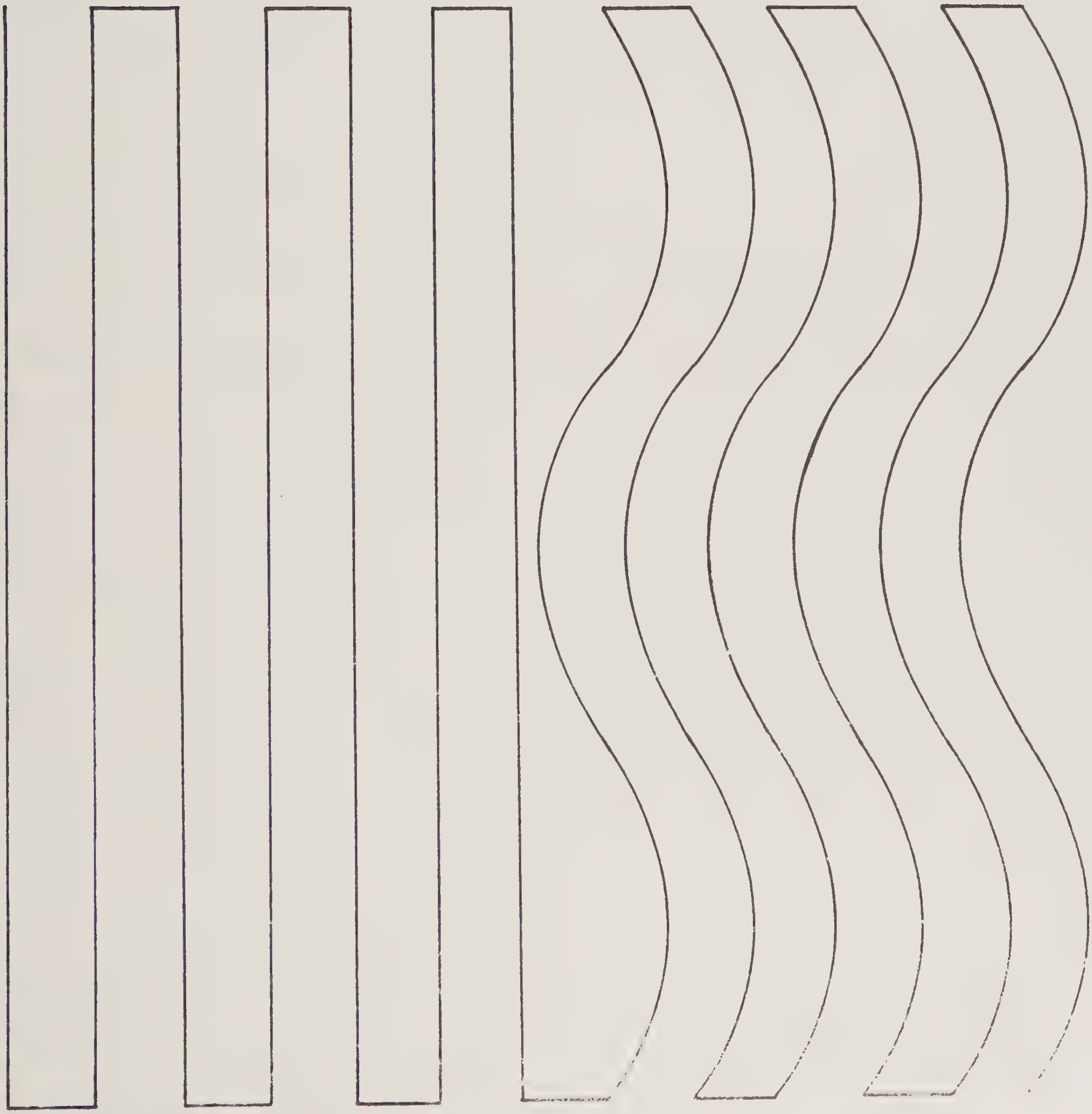


Name ______________________________

Date ________________ Period ________

Activity 11-4: Practicing Machine Stitching

This exercise will give you practice in beginning and ending stitching, speed control, turning corners, and stitching curved areas. Stitch on paper, without thread in the machine, following the lines as closely as possible. Be sure to stop at the corners with the needle down in the paper. This will enable you to turn corners without losing your stitching position.



Name ________________________________

Date ____________________ Period ____________

Activity 11-5: Sewing Machine Problem Checklist

In the space provided below, list the points you would check if you were having trouble with your sewing machine. Try to list the points in the order you would check them. To help you complete this activity, refer to the "Resolving Machine Problems" section of this lesson.

1. ____
2. ____
3. ____
4. ____
5. ____
6. ____
7. ____
8. ____
9. ____
10. ____
11. ____
12. ____

Name ____________________

Date ______________ Period ________

Activity 11-6: Evaluating Learning

Evaluate your learning by filling in the information requested in the first two sections on this page. Then evaluate your skill mastery by responding to the items in the third section.

1. In your own words, explain the function of the following sewing machine parts:

Part	Function
Tension dial	
Feed dog	
Drop feed button	
Presser foot lever	
Hand wheel	

2. For each of the sewing machine problems listed below, give a probable cause and/or solution.

Problem	Cause/Solution
The lower thread lies along the surface of the fabric, stitches are not balanced.	
The thread knots up when you begin a row of stitching.	
Stitches are not forming at all.	
The needle comes unthreaded every time you start to sew.	

3. Answer the following questions by circling yes or no.

A. Do you feel you know how to wind the bobbin and thread the sewing machine? yes no

B. Can you replace the sewing machine needle? yes no

C. Do you know how to set the machine for straight stitching without asking? yes no

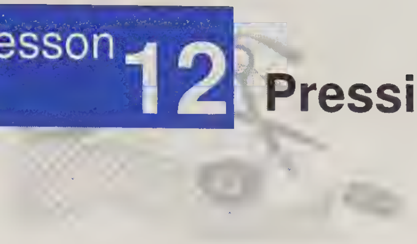
D. Do you feel comfortable doing all of the stitches listed in Activities 11-2 and 11-3? If not, which ones are giving you trouble? List them below. yes no

____

____

____

Lesson 12 Pressing As You Sew



Objectives

This lesson will help you to

- identify the meaning of *pressing* and its importance when sewing.
- describe the uses of various pieces of pressing equipment.
- select the iron temperature and pressing techniques to use with various types of fabrics.
- identify the direction to press various seams and darts and select the pressing equipment to use.

Words to Know

- pressing
- ironing
- tailor's ham
- seam roll
- press mitt
- sleeve board
- point presser
- pounding block
- needle board
- press cloth
- iron cover

Gathering Information

Pressing is one of the most important procedures you will use as you sew. Pressing can make the difference between a garment that looks homemade and one that looks professionally constructed. To achieve a store-bought look, remember to apply the sewing motto "Press as you sew." This means pressing each construction detail immediately after stitching. You will be pleased with the results.

Many pressing decisions must be made when you sew. For instance, iron temperature, equipment to use, use of moisture, and special techniques to follow are all important considerations. These decisions are based upon fiber content and fabric construction. This lesson will help you make these decisions.

Pressing or Ironing?

Pressing and *ironing* do not mean the same thing. ***Pressing*** requires an up and down motion of the iron. A light pressure is used. Generally, moisture is applied either by a steam iron or dampened press cloth. ***Ironing*** requires a back and forth motion of the iron. This motion can cause the fabric to stretch and should not be used during the construction of a sewing project.

Why Press As You Sew?

Pressing is needed from the start of each sewing project. By pressing fabric before a pattern is cut out, fabric grainlines can be improved or straightened. This will help the garment hang straight when it is completed. Removing creases and wrinkles from the fabric before cutting also ensures that garment pieces are cut to the right size.

Pressing as you sew makes the construction process easier after you cut out your pattern. The need for basting and pinning can be decreased. Details that are pressed do not always need to be basted or pinned in place. Also, when construction details are pressed flat and smooth, garment pieces are easier to join. You are less likely to get an unintended tuck of fabric caught in the stitching.

The need for pressing continues until a project is complete. During construction, desired shaping can be created in different areas of a garment, such as around darts and curves. Pressing these areas as you sew will give your finished garment a more professional look.

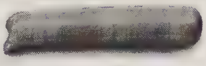
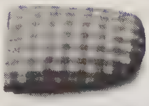
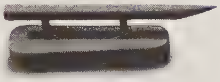
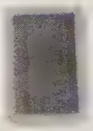
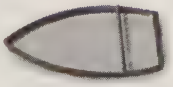
Pressing Equipment

The iron is your most important pressing tool, and you will want to take the best possible care of it. Avoid pressing over pins, zippers, and other metal objects that will scratch the bottom. You will also need to keep the soleplate clean. If it should become dirty, clean it immediately. Many commercial cleaners are available. See your teacher for instructions.

By filling the iron with water, it can become a source of steam. Use a measuring glass to pour water into the filling hole of the iron.

Most fabrics will require moisture in the form of steam. However, some fabrics water spot, so be sure to check your fabric for this characteristic. Also, too much moisture may cause an overpressed look or destroy the texture of the fabric. Always try pressing a fabric scrap before pressing garment pieces.

Many other pieces of equipment are available to aid you with specific pressing tasks. You should become familiar with the uses of various pieces of pressing equipment. This will help you choose the best tool for giving your garment a professional look. Information about pressing equipment is summarized in the following chart.

Equipment	Description	Uses
Tailor's ham	Firm, oblong cushion	Pressing curved areas of a garment, such as darts
Seam roll 	Firm, cylindrical cushion with rounded ends	Pressing small curves or long seams in narrow areas
Press mitt 	Padded mitt that fits on the hand	Pressing hard-to-reach places
Sleeve board	Two small, connected ironing boards	Pressing garment parts that will not fit on a regular ironing board
Point presser 	Wooden tool with pointed end and narrow extended surface	Pressing points and corners
Pounding block or clapper	Wooden block	Pounding seams to flatten them
Needle board 	A bed of needles attached to a stiff backing	Preventing pile fabrics from being crushed while pressing
Paper	Strips of paper	Preventing impressions of seams from being pressed through to the right side of a garment
Press cloth	Any cloth used between fabric and iron; cheesecloth is recommended	Preventing shine or iron marks on fabric
Iron cover 	A cover that slips over the bottom of an iron; usually coated with a nonstick finish	Preventing matting, shine, or melting of fabric

Setting the Iron Temperature

Most irons have a chart that indicates the correct temperature settings for various fibers. To use the chart, you must know the fiber content of your fabric. If you do not know the fiber content of your fabric, test the iron temperature on a scrap before pressing garment pieces. For fiber blends, use the temperature suited to the most heat sensitive fiber in the fabric.

Iron temperatures for a few fibers are given in the following chart.

Fiber	Recommended Setting	Pressing Considerations
Wool	Moderate	Extreme heat and moisture will cause wool fabric to mat or shine.
Silk	Low	Silk is a delicate fiber and should be pressed carefully. Care must be taken to prevent water spotting and unwanted shine from the iron.
Cotton Linen	High	These fabrics wrinkle badly and can withstand high temperatures.
Rayon Polyester Nylon	Moderate	These fibers are less heat sensitive than the other manufactured fibers.
Acrylic Spandex Acetate Modacrylic	Low	These fibers are heat sensitive and will glaze, melt, pucker, or shrink from higher temperatures.
Vinyl	No heat	This fiber is extremely heat sensitive. Finger press seams.

Applying Pressure to the Iron

Light pressure is satisfactory for most pressing. Use a press cloth to help prevent shining, matting, and iron impressions. On some fabrics, placing strips of paper between the fabric and the seam allowances is helpful. This will prevent impressions of the seam allowances from showing through to the outside of the garment.

Special care must be taken when pressing fabrics with nap, luster, texture, or a raised design. When using these fabrics, always test a scrap to be sure of the pressing technique to use.

(Continued)

Too much pressure on the iron can destroy the texture of some fabrics. Covering the ironing board with a towel can help prevent flattening fabrics with nap or a raised design. Use light pressure when pressing these fabrics. If the fabric can withstand steam, hold the iron slightly above the fabric and allow the steam to do the work.

The impression of the iron may be left on the surface of napped fabrics like corduroy or pile fabrics like velvet. Therefore, these fabrics should always be pressed on the wrong side. Placing these fabrics right side down on a towel (or a needle board for pile fabrics) will help preserve their texture. Again, use light pressure or allow the steam to do the work.

Pressing Seams and Darts

Pressing over seams and darts in the direction they were stitched helps to set the stitching. Most seams, such as side, sleeve, and center back seams, are then pressed open. This gives them a smooth, flat appearance on the outside of the garment.

Some exceptions for pressing seams and some guidelines for pressing darts are given below.

- Armhole seams are pressed toward the bodice of a garment.
- Waistline seams are generally pressed up toward the bodice of a garment.
- Seams that attach small pieces to a garment and will eventually be enclosed are generally pressed toward the small piece. Seams used to attach collars and cuffs would fall into this group.
- Seams used to assemble collars and cuffs are first pressed open over a point presser. Then they are pressed toward the under collar or the cuff facing, respectively.
- Horizontal darts are pressed down toward the hem of a garment.
- Vertical darts are pressed toward the center of a garment.

Name ______________________

Date ______________ Period __________

Activity 12-1: Selecting Iron Temperature

Indicate the iron temperature to use with each of the fabrics listed below. Also describe points you should consider when pressing each fabric and any special techniques you should use. To help you complete this activity, your teacher may provide fabric samples to examine and possibly try pressing. Try to complete this activity without referring to the information given earlier. Then check your answers with the information in the lesson and correct them as needed.

Fabric	Iron Temperature	Pressing Considerations and Special Techniques
Fabric #1: Lightweight shirting fabric, textured surface 100% Cotton		
Fabric #2: Velvet, pile surface 65% Cotton 35% Rayon		
Fabric #3: Stretch fabric, suitable for swimwear 87% Nylon 13% Spandex		
Fabric #4: Flannel, napped surface		
Fabric #5: Lightweight, wool-like fabric 81% Acrylic 19% Wool		
Fabric #6: Corduroy, napped surface 60% Cotton 40% Polyester		
Fabric #7: Knit fabric, suitable for warm-ups 50% Acrylic 50% Polyester		
Fabric #8: Smooth, satinlike surface 87% Acetate 13% Nylon		

Name ________________________________

Date ____________________ Period ____________

Activity 12-2: Pressing Garment Details

Below is a list of various garment details. Give the direction in which each detail should be pressed. Also list the pressing equipment that should be used to make the task easier. To complete this activity, you will be using information given in the sections on pressing equipment and pressing seams and darts. Try to complete this activity without referring to the information given earlier. Then check your answers with the information in the lesson and correct them as needed. After filling in the chart, answer the questions at the bottom of the page.

Garment Detail	Direction to Press	Pressing Equipment to Use
Curved side (hip) seam		
Center back seam		
Armhole seam		
Shoulder darts		
Pant leg seam		
Waistline seam		
Bust darts		
Collar points (involves seam used to assemble collar pieces)		
Neckline seam (seam that attaches collar to garment)		

1. What type of iron motion is used when pressing?

____

2. What type of iron motion is used when ironing?

____

3. Why should ironing *not* be used during the construction of a sewing project?

____

____

4. Explain why pressing as you sew is such an important sewing step.

____

____

Name ______________________________

Date ____________________ Period ____________

Activity 12-3: Evaluating Learning

Demonstrate your understanding of this lesson by answering the following questions. Complete this activity without referring to information given in the lesson.

1. In your own words, describe the difference between pressing and ironing.

____

____

____

2. In your own words, explain why pressing as you sew is such an important sewing step.

____

____

____

3. Other than the iron and the ironing board, list three pieces of pressing equipment and describe their uses.

	Equipment	Uses
A.		
B.		
C.		

Match the following fibers with the recommended iron setting for pressing each one.

____ 4. Linen.	A.	no heat
____ 5. Vinyl.	B.	low
____ 6. Polyester.	C.	moderate
____ 7. Nylon.	D.	high
____ 8. Silk.		
____ 9. Cotton.		
____ 10. Acrylic.		
____ 11. Wool.		
____ 12. Acetate.		
____ 13. Rayon.		

(Continued)

Name ______________________________

14. What type of pressure should be applied to the iron when pressing most fabrics?

____

15. What should you do when you are uncertain about the iron temperature or pressing techniques to use when working with a fabric?

____

____

16. Explain how most seams should be pressed.

____

____

____

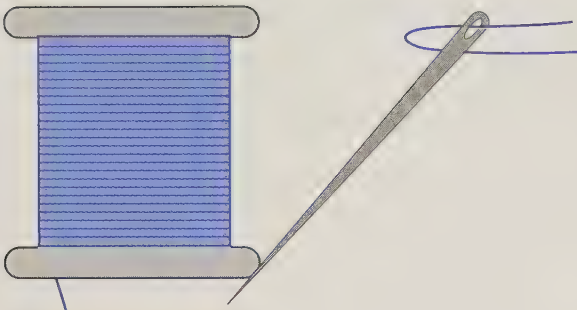
17. Give a guideline for pressing darts.

____

____

____

notes



Lesson 13

Staystitching

Objectives

This lesson will help you to

- explain the meaning of the sewing term *staystitching.*
- staystitch a garment piece.

Words to Know

staystitching
directional stitching

Gathering Information

Handling garment pieces made from stretchy or loosely woven fabrics can cause them to lose their shape. Even pieces cut from sturdier fabrics can stretch along curved edges. Staystitching before construction can be used to avoid this problem.

What Is Staystitching?

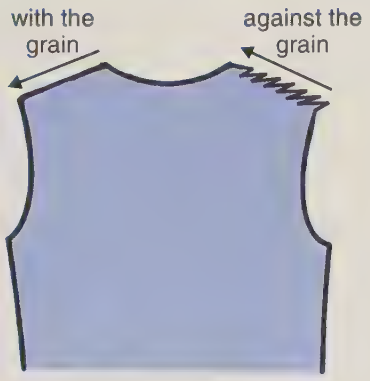
Staystitching is used to stabilize edges that might otherwise be stretched out of shape during the construction process. This step is completed prior to the construction of all other garment details. Staystitching is ***directional stitching*** because it is done with the grain of the fabric.

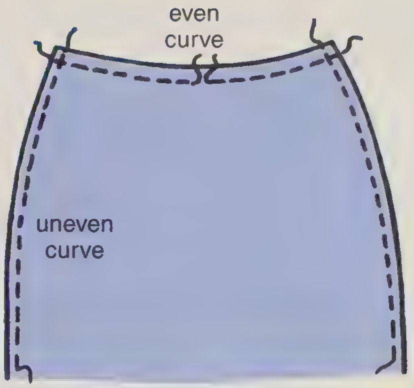
When Is Staystitching Needed?

Staystitching is needed on

- Curved or bias cut edges.
- Edges of knit fabric where stretching needs to be controlled, such as shoulder seams.
- Curved edges of any fabric piece that will be clipped during the construction process. Staystitching will prevent weakening of the seam due to the clipping.

How to Staystitch





To staystitch, follow these steps:

1. Adjust the sewing machine to a regular stitch length. Be sure to use matching thread, as this stitching will not be removed.
2. Stitch ½ inch from the cut edge of the garment piece through a single layer of fabric.
3. Be sure to stitch with the grain. If you stitch against the grain you will stretch the area being stitched.

You can use a number of methods to help you stitch with the grain. As a general rule, stitch from the wide to the narrow part of a garment piece. Sliding your fingers along the edge of the garment piece can also tell you the direction of the grain. If the edge stays smooth, you are going with the grain—stitch in that direction. If threads are raveled free, you are going in the opposite direction of the grain—stitch from the other direction.

Stitch even curves, such as waistlines, from both directions toward the center. Stitch uneven curves, such as skirt or pant side seams, from the direction that stays with the grain longest.

For knit fabrics, determining the staystitching direction may be difficult. Follow the above guidelines whenever possible. Staystitch those seams that will eventually be sewn together in the same direction.

Activity 13-1: Practicing Staystitching

Supplies needed:

thread
shears
fabric

sewing machine
bobbin
pattern piece 13A (page 177)

Cut out the pattern piece from a fabric scrap. Be sure to cut the pattern out with the grain of the fabric. To staystitch, follow the directions in the "How to Staystitch" box. Be sure to stitch with the grain.

Name ______________________________

Date ________________ Period __________

Activity 13-2: Evaluating Learning

The staystitched sample you completed in Activity 13-1 will be evaluated using the chart below. Also, space is provided for you to answer questions that will help you demonstrate your understanding of staystitching.

	Poor	Fair	Good	Excellent
A regular stitch length has been used.				
All stitching is ½ inch from the cut edge.				
Even curves have been stitched to the center from each direction.				
Uneven curves have been stitched from the direction that goes with the grain for the longest length.				
All edges that require staystitching have been stitched.				

In your own words, answer each of the following questions.

1. What purpose does staystitching serve?

____

____

2. When is staystitching completed in the sewing process?

____

____

3. Where is staystitching done on a garment?

____

____

4. Explain how staystitching is done with the grain of the fabric.

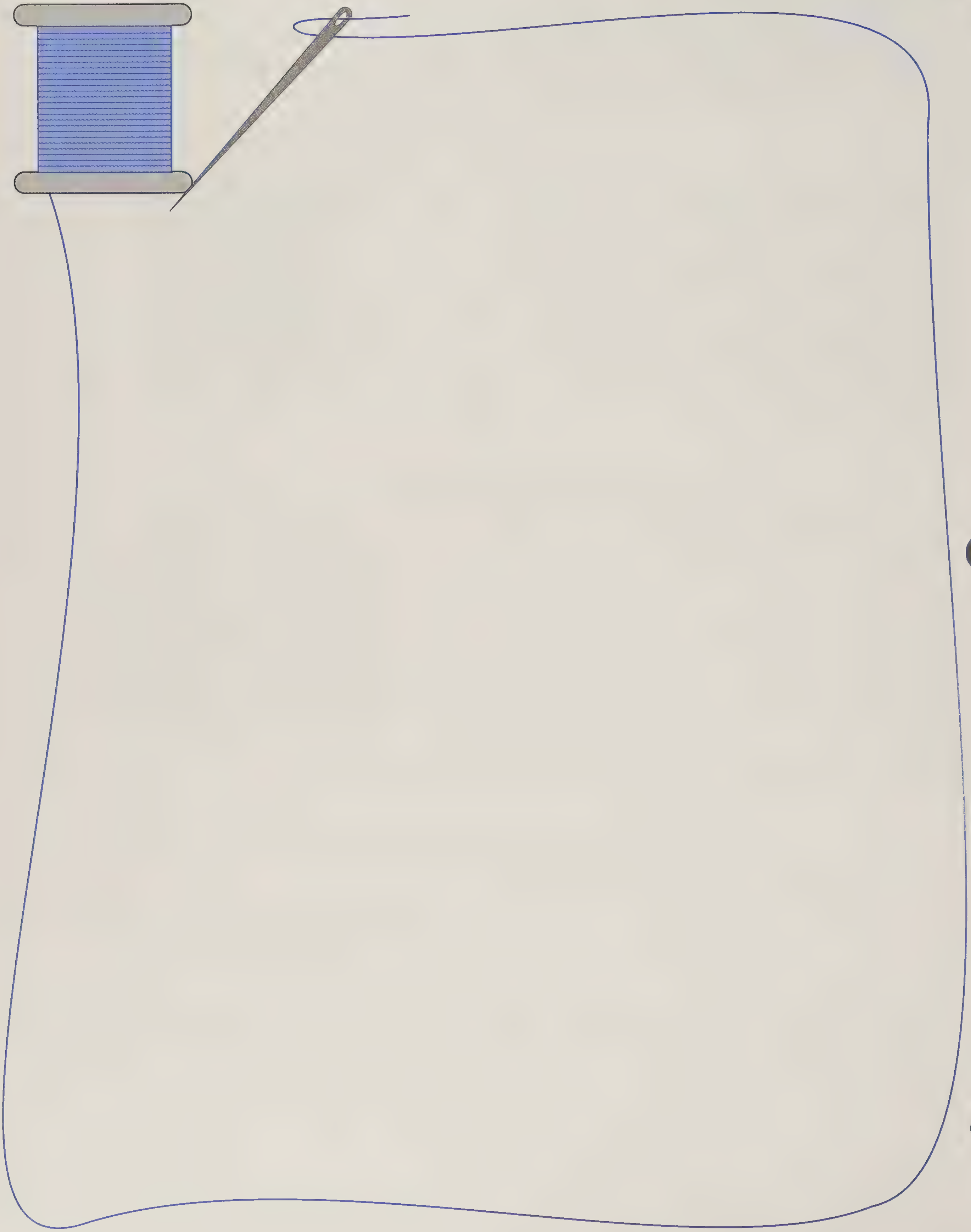
____

____

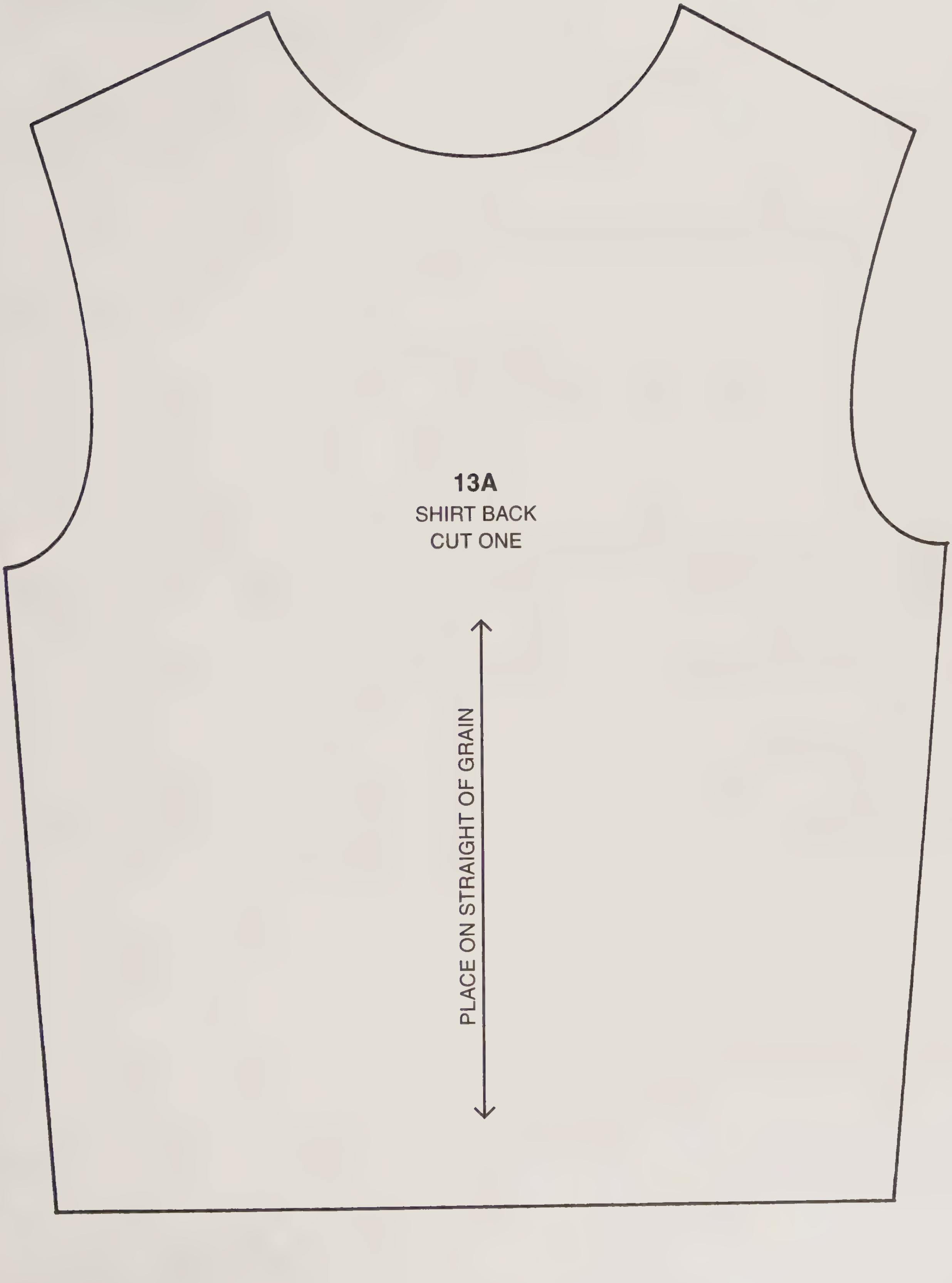
____

____

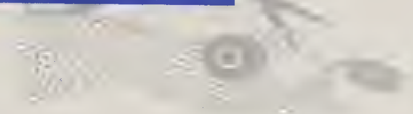
notes



Pattern piece for Activity 13-1


13A
SHIRT BACK
CUT ONE
PLACE ON STRAIGHT OF GRAIN

Lesson 14 Seams



Objectives

This lesson will help you to

- identify methods for constructing seams.
- select the appropriate seam to use for various types of fabrics.
- practice making a number of seams.

Words to Know

seam
pin basting
hand basting
plain seam
topstitched seam
welt seam
slot seam
flat-felled seam
double-stitched seam
French seam

Gathering Information

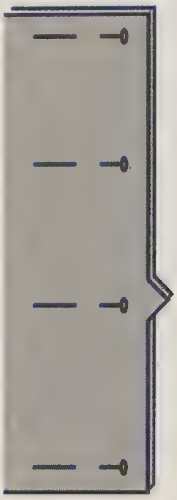
A ***seam*** is a row of stitching that joins one or more garment pieces together. There are many methods of constructing seams. Some seams have raw edges that may need to be finished to provide a neater appearance and prevent raveling. (Seam finishing techniques are discussed in Lesson 16, "Seam Finishes.") Other seams are self-finished as they are constructed and require no further finishing. In addition to holding the garment together, some seams provide a decorative touch. Some seams are designed to be extra sturdy or to give the garment a tailored appearance.

The type of seam you use on a given garment will depend on garment design, durability desired, and fabric characteristics. The pattern instruction sheet will give you an indication of the type of seam to use. You will still need to make the decision based on your fabric and needs. This lesson will help you decide which type of seam to use. It will also tell you how to construct different types of seams. (For information on serged seams, see pages 395-396 of Lesson 45, "Serger Construction Techniques.")

Pin Basting Seams

Pinning garment pieces together along a seamline is called ***pin basting***. This is done to hold garment pieces together until machine stitching is applied. If the seam is stitched without pinning, the layers of fabric might stretch or slip. This could cause the seam to be crooked, puckered, or uneven.

(Continued)



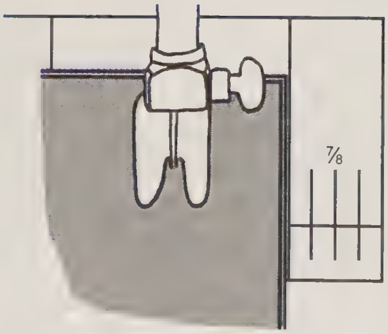
Unless your pattern instruction sheet states otherwise, seams are always stitched with the right sides of the garment pieces together. When pinning garment pieces, match seam edges, notches, and the ends of the pieces. Place a pin at each end of the seam and at the notches. Add additional pins, adjusting the fabric so that it lays flat. Place pins about four inches apart. Do not overpin.

Pins should be placed at a right angle to the seam with the pinheads toward the edge. This will make removing them easier. Remove the pins before stitching over them. Stitching over pins can damage the machine needle and cause uneven stitches that weaken seams.

Hand Basting Seams

For some seams, pins can be awkward to handle while maneuvering the fabric under the machine needle. This may be true when stitching some eased or curved seams and narrow areas such as set-in sleeves. In these cases, you may wish to pin baste first. Then hand baste close to the seamline and remove the pins. ***Hand basting*** is hand stitching designed to temporarily hold garment pieces together until permanent machine stitching can be applied.

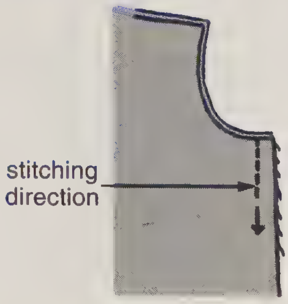
Using the Stitching Guidelines



Most sewing machines have stitching guidelines on the throat plate at either side of the presser foot. Place the edge of the fabric along one of these lines as you stitch. This will give you an even seam allowance of the desired width.

Most seams are stitched at ⅝ inch. Occasionally, the pattern instruction sheet will tell you to stitch at a different width. Always read your instruction sheet.

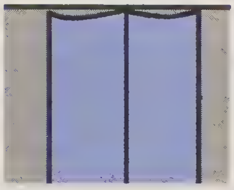
Stitching with the Grain



In Lesson 13, the importance of stitching with the grain of the fabric was discussed in terms of staystitching. Stitching with the grain of the fabric is also important when stitching seams. This prevents garment pieces from stretching as they are being stitched.

To determine the direction of the grain, run your fingers along the edge of the garment pieces. The threads will be smoothed down in the direction of the fabric grain. Stitch in that direction.

Stitching Plain Seams



The ***plain seam*** is the most widely used seam. It is also the basis for constructing other types of seams.

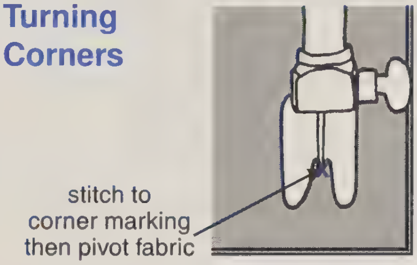
Follow these steps:

1. Place the pin-basted garment pieces under the presser foot of the sewing machine. Position the pieces so that the bulk of the fabric is at the left of the machine foot.
2. Line up the edge of the fabric with the ⅝-inch line on the throat plate of the machine.
3. Lower the presser foot and insert the machine needle into the fabric about ⅜ inch from the top edge of the seam. The machine threads should be pulled to the back of the presser foot.
4. Take one or two stitches while holding onto the machine threads.
5. Reverse the machine and stitch to the top edge of the seam.
6. Release the stitch reverse and stitch the seam. Be careful to keep the fabric edge on the correct guideline.
7. Backstitch at the end of the stitching row.
8. Press the seam open unless the pattern instruction sheet states otherwise. (Lesson 16, "Seam Finishes," shows how to finish seam edges.)

Stitching Curved Seams

Stitching curved seams can be difficult. For best results, stitch slowly but at an even speed. If you must stop stitching to adjust the fabric, be sure to stop with the needle down in the fabric. This will prevent the fabric from slipping as you adjust it.

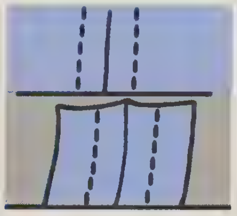
Turning Corners



Turning corners can also be difficult. You may find marking the corner helpful. This will prevent you from stitching too far into the seam allowance.

Stitch to the corner marking. Leave the needle in the fabric and lift the presser foot. Pivot the fabric. Lower the presser foot and continue stitching.

Topstitched Seam

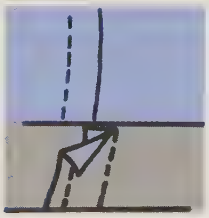


A ***topstitched seam*** is a variation of the plain seam and is used to achieve a decorative effect.

Follow these steps:

1. Make a plain seam and press open.
2. From the right side of the garment, stitch ¼ inch (or desired distance) from each side of the seamline. Catch the seam allowances in the stitching.

Welt Seam

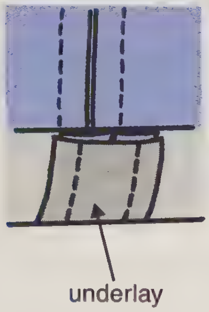


A ***welt seam*** gives the finished garment a tailored look.

Follow these steps:

1. Make a plain seam.
2. Press both seam allowances in the same direction.
3. Trim the under seam allowance to ¼ inch.
4. From the right side of the garment, stitch ¼ inch from the seamline, catching the wider seam allowance in the stitching.

Slot Seam

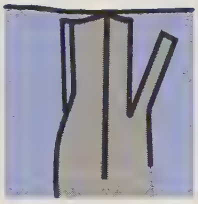


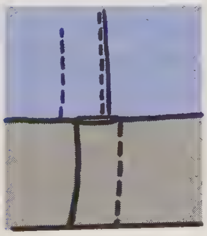
A ***slot seam*** will help prevent stretching in the seamline. It will also add a decorative touch to the finished garment.

Follow these steps:

1. Baste seam together along the seamline. Press open.
2. Cut a 1½-inch wide strip of fabric to use as an underlay. (You may wish to use a contrasting fabric as a decorative detail.)
3. Center underlay beneath the seam.
4. From the right side of the garment, topstitch ¼ inch on each side of the seamline.
5. Remove basting.

Flat-Felled Seam



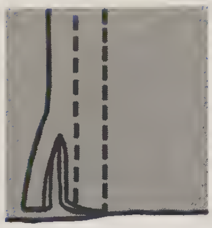


A ***flat-felled seam*** is self-enclosed and requires no additional seam finishing technique. Use it where durability is needed or a tailored appearance is desired.

Follow these steps:

1. With the wrong sides of the fabric together, make a plain seam. Press seam allowances in one direction.
2. Trim the under seam allowance to ¼ inch.
3. On the remaining seam allowance, turn under ¼ inch and press. Fold this side over the trimmed edge. Pin in place.
4. Stitch very close to the folded edge of the seam allowance.

Double-Stitched Seam

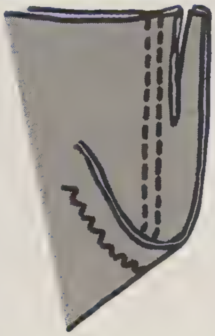


A ***double-stitched seam*** is excellent for sheer fabrics or lightweight knits.

Follow these steps:

1. Make a ⅝-inch plain seam.
2. Stitch the two seam allowances together, stitching ¼ inch from the seamline. Trim the seam to ⅜ inch.
3. Press seam to one side.

Twin-Needle Seam

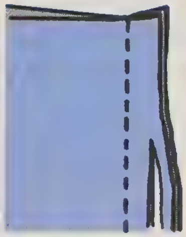


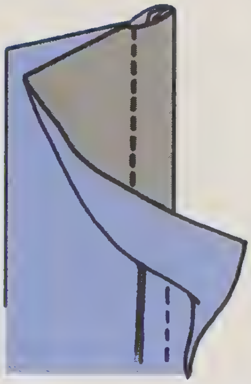
The ***twin-needle seam*** is a variation of the double-stitched seam. It provides stretch and is excellent for seams on knit garments

Follow these steps:

1. Place right sides of fabric together. Stitch the seam using a twin needle and two spools of thread.
2. Trim the excess seam allowance.
3. Press seam to one side.

French Seam





The ***French seam*** is a durable, self-enclosed seam that is excellent for concealing the seam allowances in sheer fabric.

Follow these steps:

1. With the wrong sides of the fabric together, stitch a ⅜-inch seam.
2. Trim seam allowances to slightly less than ¼ inch.
3 Press seam open.
4. Fold the right sides of the fabric together, with the seam exactly on the foldline.
5. Press and pin in place.
6. Stitch on the original pattern seamline, which is ¼ inch from the fold.
7. Press seam to one side.

Name ______________________________

Date ____________________ Period ____________

Activity 14-1: Matching Seams to Fabric

Your teacher will be giving you six different fabric swatches. Attach the swatches in the spaces provided. Indicate under each fabric swatch which seam would be most appropriate for the fabric. Also indicate the criteria on which you based your decision, such as fabric weight or tendency to ravel.

Seams

seam ______________________________
criteria ______________________________

seam ______________________________
criteria ______________________________

seam ______________________________
criteria ______________________________

seam ______________________________
criteria ______________________________

seam ______________________________
criteria ______________________________

seam ______________________________
criteria ______________________________

Name ______________________________

Date ________________ Period __________

Activity 14-2: Practicing Making Seams

Supplies needed:

- thread
- fabric scraps
- sewing machine
- bobbin
- shears

Cut twelve 2- by 6-inch pieces of fabric. You will be using two fabric pieces for each seam you sew. Construct samples of the following seams:

- plain seam
- welt seam
- slot seam
- flat-felled seam
- double-stitched seam
- French seam

To construct the seams, follow the procedures given in this lesson.

Name ________________________________

Date ____________________ Period __________

Activity 14-3: Evaluating Learning

The seam samples you completed in Activity 14-2 will be evaluated using the chart below. After completing the chart, answer the question at the bottom of the page.

		Poor	Fair	Good	Excellent
Correct procedure followed.	Plain				
	Welt				
	Slot				
	Flat-felled				
	Double-stitched				
	French				
Stitching is straight and an even distance from the edge.	Plain				
	Welt				
	Slot				
	Flat-felled				
	Double-stitched				
	French				
Threads are neatly clipped.	Plain				
	Welt				
	Slot				
	Flat-felled				
	Double-stitched				
	French				
Seam is neatly pressed.	Plain				
	Welt				
	Slot				
	Flat-felled				
	Double-stitched				
	French				

What factors should you consider when selecting the type of seam to use in constructing your garment?

____

____

____

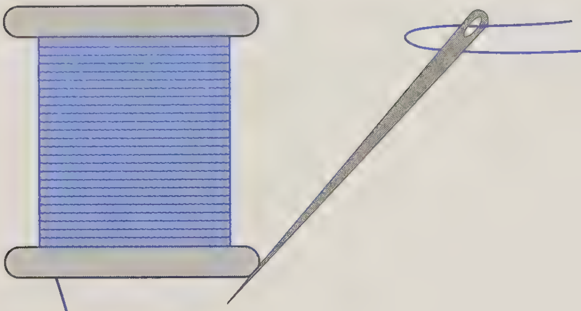
____

____

____

____

notes



Lesson 15

Clipping, Notching, Trimming, and Grading

Objectives

This lesson will help you to

- explain the meaning of the sewing terms *clipping*, *notching*, *trimming*, and *grading*.
- determine when to clip, notch, trim, and grade.
- practice clipping, notching, trimming, and grading.

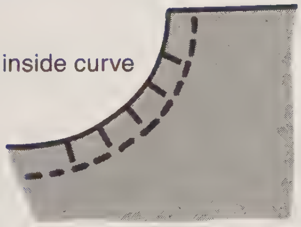
Words to Know

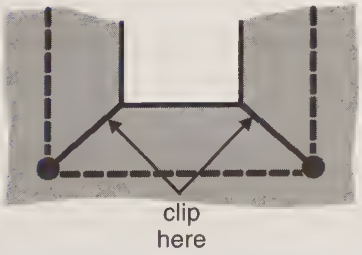
clipping
notching
trimming
grading

Gathering Information

Some seamlines tend to pucker or look bulky. For seams on a finished garment to appear smooth, they may require special attention after stitching. This lesson discusses when and how to use various techniques to achieve neat, smooth seamlines.

What Is Clipping?



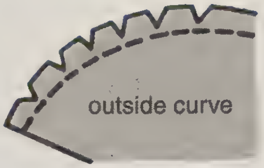


Clipping means to cut slits into the seam allowance. Clipping is needed on all seams with an inside curve. This will make the seam turn over smoothly. If curved seams are not clipped, they will pucker when turned.

Clipping is usually done at ½-inch intervals at a 90 degree angle to the seamline. Be sure not to cut the seam stitching.

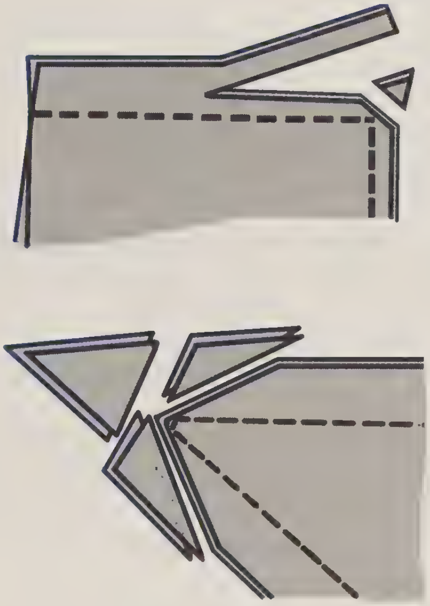
On occasion, an instruction sheet will ask that a single clip be made. For instance, you might clip to a dot on the corner of a placket opening. In these instances, it is important to clip only to the dot. Again, be careful not to cut through the stitching

What Is Notching?



Notching means to cut wedges into the seam allowance. Notching is done on seams with an outside curve. It removes excess fabric that would otherwise cause the seam to be bulky when turned. As with clipping, it is important not to cut through the stitching when you notch.

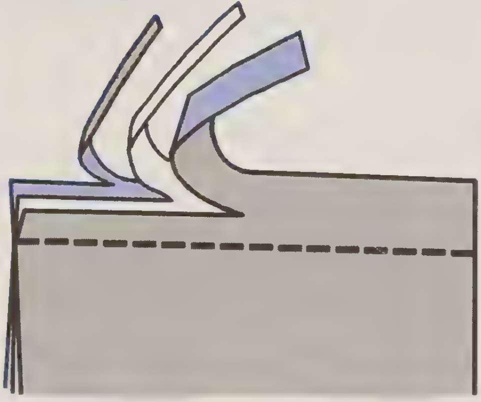
What Is Trimming?



Trimming means to cut off part of the seam allowance to reduce bulk. Trim away ⅜ of an inch of fabric along the full length of the seam. This will leave a ¼-inch seam allowance.

Corners of garment pieces are trimmed by cutting diagonally across the corner. Tighter angles, such as the points of collars, require more bulk to be removed. Trim excess fabric from the sides of a point at an angle. Then trim diagonally across the end of the point, being careful not to cut through the stitching.

What Is Grading?



Grading means to trim each layer of the seam allowance to a different width. Grading results in a layered seam, which is less noticeable on the outside of the garment. Grading is often done instead of trimming because it reduces bulk more smoothly.

Name ______________________________

Date ____________________ Period ____________

Activity 15-1: Practicing Clipping, Notching, Trimming, and Grading

Supplies needed:

- thread
- shears
- pins
- medium- to heavy-weight fabric scraps
- sewing machine
- bobbin
- pattern piece 15A (page 193)

Cut out four fabric pieces using the pattern provided. With right sides together, sew together two of the pieces following the stitching lines for the inside curve sample. Sew the other two pieces together following the stitching lines for the outside curve sample.

1. Try to turn and press each sample. Explain what happens.

   inside curve sample ______________________________

   ____

   ____

   outside curve sample ______________________________

   ____

   ____

2. Trim the seam allowance and the stitched corner of the inside curve sample. Also, clip the seam allowance. Then turn and press the sample. Explain the results.

   ____

   ____

   ____

   ____

3. Grade the seam allowance and trim the stitched corner of the outside curve sample. Also, notch the seam allowance. Then turn and press the sample. Explain the results.

   ____

   ____

   ____

   ____

Name ______________________________

Date ________________ Period ____________

Activity 15-2: Evaluating Learning

The clipping, notching, trimming, and grading samples you completed in Activity 15-1 will be evaluated using the chart below. Also, space is provided for you to write an explanation of these four sewing terms.

Inside Curve Sample	Poor	Fair	Good	Excellent
Corners trimmed diagonally to reduce bulk. Seam has not been weakened by trimming too close.				
Seam trimmed to ¼ inch. Seam has not been weakened by trimming too close.				
Seam allowance has been clipped close to stitching, but stitching has not been cut.				

Outside Curve Sample				
Corners trimmed diagonally to reduce bulk. Seam has not been weakened by trimming too close.				
Seam graded to varying widths to reduce bulk.				
Seam allowance has been notched close to stitching, but stitching has not been cut.				

In your own words, explain the meaning of the terms given below. Include in your explanation when you would need to use each of the techniques and how each is completed.

clipping ______________________________

____

notching ______________________________

____

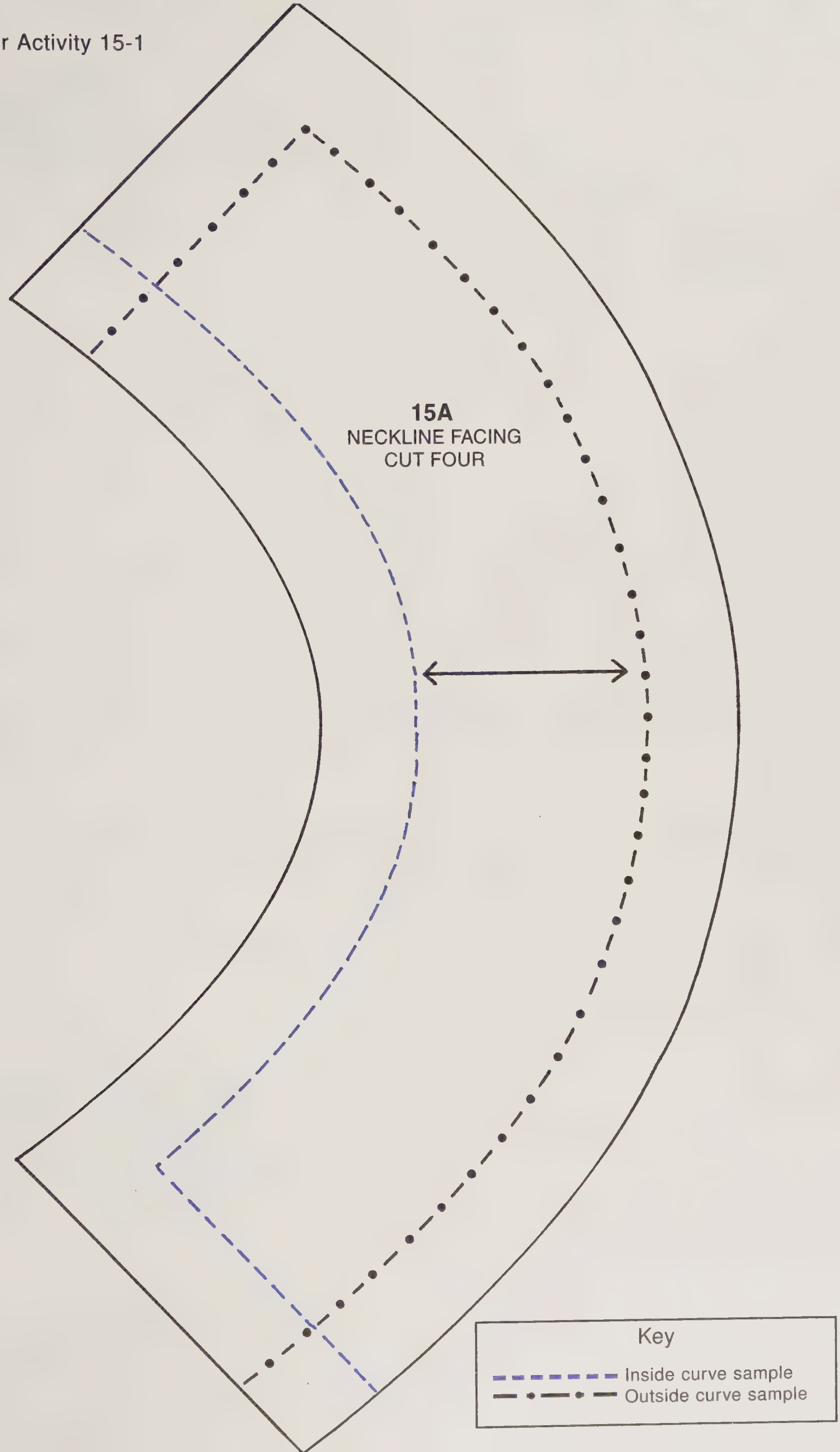
trimming ______________________________

____

grading ______________________________

____

attern piece for Activity 15-1


15A
NECKLINE FACING
CUT FOUR
Key
Inside curve sample
Outside curve sample

Lesson 16 Seam Finishes

Objectives

This lesson will help you to

- identify various seam finishes.
- select the appropriate seam finish for various types of fabric.
- practice making a number of seam finishes.

Words to Know

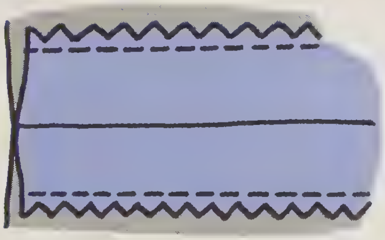
seam finish
stitched-and-pinked finish
turned-and-stitched finish
zigzagged finish
serge- (pine-) stitched finish
bound finish

Gathering Information

Raw seam edges of a garment can look unattractive and may ravel during laundering and wearing. This can result in weakened seams and will reduce the life of the garment. Therefore, raw seam edges generally need to be finished in some way. A ***seam finish*** is a technique used to keep the raw edges of seam allowances from raveling. Seam finishes also make raw edges look more attractive.

A number of techniques can be used to finish seams. The method you select will depend on the weight of your fabric and the degree to which it ravels. If your fabric does not ravel, you may not need to finish the raw edges. Seam finishes are also unnecessary on self-enclosed seams, such as the flat-felled seam and the French seam.

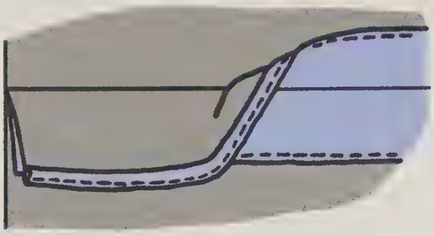
Pinked or Stitched-and-Pinked Finish



Use these finishes on firmly woven fabrics or fabrics that ravel only slightly. Stitching and pinking is a sturdier finish and more effectively prevents raveling than pinking alone.

To make a pinked finish, use pinking shears and pink close to the edge of the seam allowance. For a ***stitched-and-pinked finish,*** stitch ¼ inch from the edge of the seam allowance. Then pink close to the edge. Be careful not to cut through the stitching.

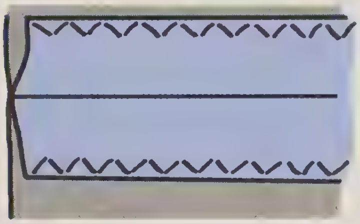
Turned-and-Stitched Finish



Use a ***turned-and-stitched finish*** for lightweight or medium weight fabrics.

To make this finish, turn under the edge of each seam allowance ¼ inch and press. Stitch close to the fold.

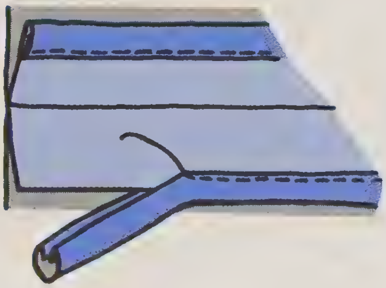
Zigzagged or Serge- (Pine-) Stitched Finish



Use the ***zigzagged finish*** or the ***serge-(pine-)stitched finish*** for fabrics that ravel. These finishes are useful in preventing the seam allowances of some knit fabrics from curling.

To make these finishes, zigzag or serge (pine) stitch close to the seam allowance edge. (See Lesson 11, "Operating the Sewing Machine," for more information about these stitches. See Lesson 45, "Serger Construction Techniques," for information on the serged/overlock finish.)

Bound Finish



Use the ***bound finish*** for fabrics that ravel easily. It is an especially good choice for finishing the seams in unlined jackets and coats.

To make this finish, trim notches from seam allowance. Wrap double-fold bias tape around the seam allowances. Make sure the wider side of the tape is underneath. Stitch through the seam allowance close to the fold of the tape. Be sure to catch the underneath side of the tape in the stitching. Be sure not to catch the outer portion of the garment in the stitching.

Sheer tricot bias binding may also be used to enclose seam edges. Fold the tricot strip in half lengthwise and encase the edge of the seam allowance. Stretch strip slightly as you sew. It will curl over the seam edge. Stitch using a straight stitch or medium zigzag.

Name ______________________________

Date ________________ Period __________

Activity 16-1: Matching Seam Finishes to Fabric

Your teacher will be giving you six different fabric swatches. Attach the swatches in the spaces provided. Indicate under each fabric swatch which seam finish would be most appropriate for the fabric. Also indicate the criteria on which you based your decision, such as fabric weight or tendency to ravel.

Seam Finishes

seam finish ____________________
criteria ______________________

seam finish ____________________
criteria ______________________

seam finish ____________________
criteria ______________________

seam finish ____________________
criteria ______________________

seam finish ____________________
criteria ______________________

seam finish ____________________
criteria ______________________

Name ______________________________

Date ____________________ Period ____________

Activity 16-2: Practicing Seam Finishes

Supplies needed:

- thread
- fabric scraps
- sewing machine
- bobbin
- shears
- pinking shears
- double-fold bias tape or tricot bias binding

Cut eight 2- by 6-inch pieces of fabric. For each sample, place two pieces right sides together and make a ⅝-inch plain seam. Construct samples of the following seam finishes:

- stitched-and-pinked finish
- turned-and-stitched finish
- zigzagged or serge- (pine-) stitched finish
- bound finish

To construct the seam finishes, follow the procedures given in this lesson.

Name ______________________________

Date ____________________ Period ____________

Activity 16-3: Evaluating Learning

The seam finish samples you completed in Activity 16-2 will be evaluated using the chart below. After completing the chart, answer the question at the bottom of the page.

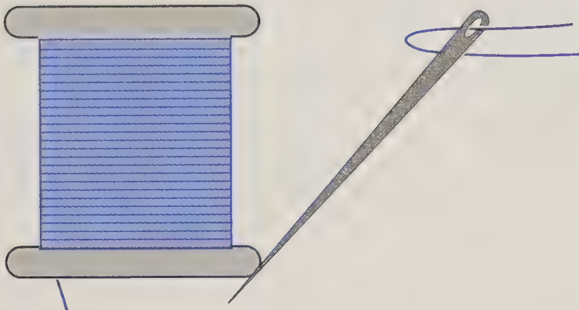
		Poor	Fair	Good	Excellent
Correct procedure followed.	Stitched & pinked				
	Turned & stitched				
	Zigzagged or serge- (pine-) stitched				
	Bound				
Finish applied close to edge of seam allowance. (Bound finish should be stitched close to the fold of the bias tape.)	Stitched & pinked				
	Turned & stitched				
	Zigzagged or serge- (pine-) stitched				
	Bound				
Appropriate stitch length and tension used.	Stitched & pinked				
	Turned & stitched				
	Zigzagged or serge- (pine-) stitched				
	Bound				
Threads clipped and seam pressed open.	Stitched & pinked				
	Turned & stitched				
	Zigzagged or serge- (pine-) stitched				
	Bound				
Stitching is straight.	Stitched & pinked				
	Turned & stitched				
	Zigzagged or serge- (pine-) stitched				
	Bound				

What factors should you consider when selecting the type of seam finish to use when constructing a garment?

____

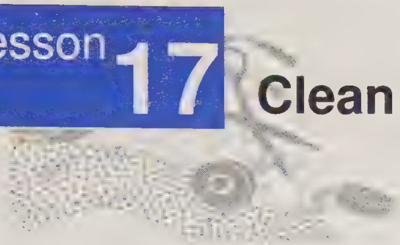
____

notes



Lesson 17

Clean Finishing



Objectives

This lesson will help you to

- explain the meaning of the sewing term *clean finishing.*
- determine when to clean finish an edge.
- prepare a clean finished edge.

Word to Know

clean finishing

Gathering Information

An important sewing step is "finishing" the raw edges of a garment piece. Raw edges are edges that have not been previously sewn in some way. Raw edges may be pinked, zigzagged, bound, or serged. The technique you select will depend upon the location of the raw edge and the fabric's characteristics. Finishing raw edges leads to longer wear and neater appearance of the garment. One method for finishing raw edges is called clean finishing, which will be discussed in this lesson. For information on finishing an edge using a serger, refer to Lesson 45, "Serger Construction Techniques."

What Is Clean Finishing?

Clean finishing is a means of finishing raw edges of a garment piece by turning under the edge and stitching.

Why Is Clean Finishing Necessary?

Raw edges are generally clean finished for two reasons.

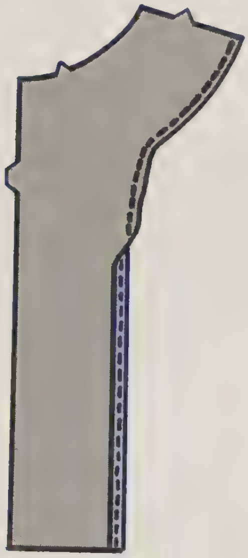
- To prevent them from raveling during wearing and laundering.
- To provide a neat, finished appearance to a garment piece that would otherwise have a raw, unfinished edge.

Where Is Clean Finishing Needed?

Most often, clean finishing is needed on the long, unnotched edges of facings. It is also used to finish the edge of some hems.

Clean finishing may be used with light- to medium-weight fabrics. This technique is not used with heavy fabrics as it increases the bulk along the finished edges. For heavier fabrics, the edge may be finished with a sewing machine overcast stitch or a serger overlock stitch.

How to Clean Finish



To clean finish a garment piece, follow these steps:

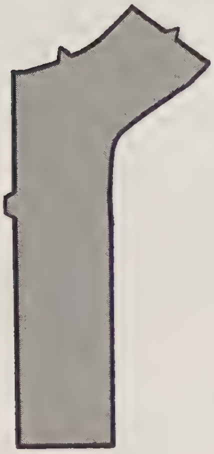
1. Using a regular stitch length, stitch ¼ inch from the raw edge of the garment piece. (The sewing machine presser foot will be close to the edge of the fabric as you stitch.)
2. Press under ¼ inch along the line you have just stitched.
3. Stitch again close to the folded edge.

Name ______________________________

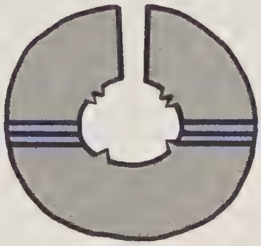
Date ____________________ Period ____________

Activity 17-1: Determining When to Clean Finish an Edge

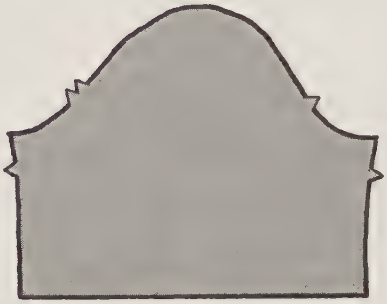
Below are a number of pattern pieces. Under certain circumstances and with specific fabric weights, each piece may need to be clean finished. With a pen, trace over the line(s) of each pattern piece that should be clean finished.



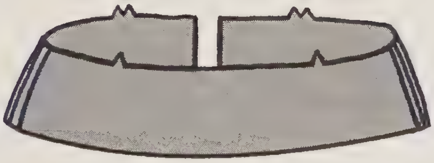
front facing



neck facing



sleeve



waistline facing

Activity 17-2: Practicing Clean Finishing

Supplies needed:

- thread
- shears
- fabric scrap
- bobbin
- sewing machine
- pattern piece 17A (page 205)

Fold the fabric scrap in half, keeping the grainline straight. Pin the pattern piece on the fabric scrap, placing the foldline on the folded edge. Cut out the pattern piece. Open it flat and clean finish the unnotched edge.

Name ______________________________

Date ____________________ Period __________

Activity 17-3: Evaluating Learning

The clean finished edge that you completed in Activity 17-2 will be evaluated using the chart below. A space is also provided for you to write an explanation of clean finishing. Be prepared to discuss your work and your explanation.

	Poor	Fair	Good	Excellent
Edge is smoothly curved.				
Edge has been evenly turned under ¼ inch.				
All stitching is straight and an even distance from the edge.				
The correct procedure has been followed.				
All threads have been clipped.				

In your own words, write an explanation of the term *clean finishing*. Include in your explanation under what circumstances you might need to clean finish an edge.

____

____

____

____

____

____

____

____

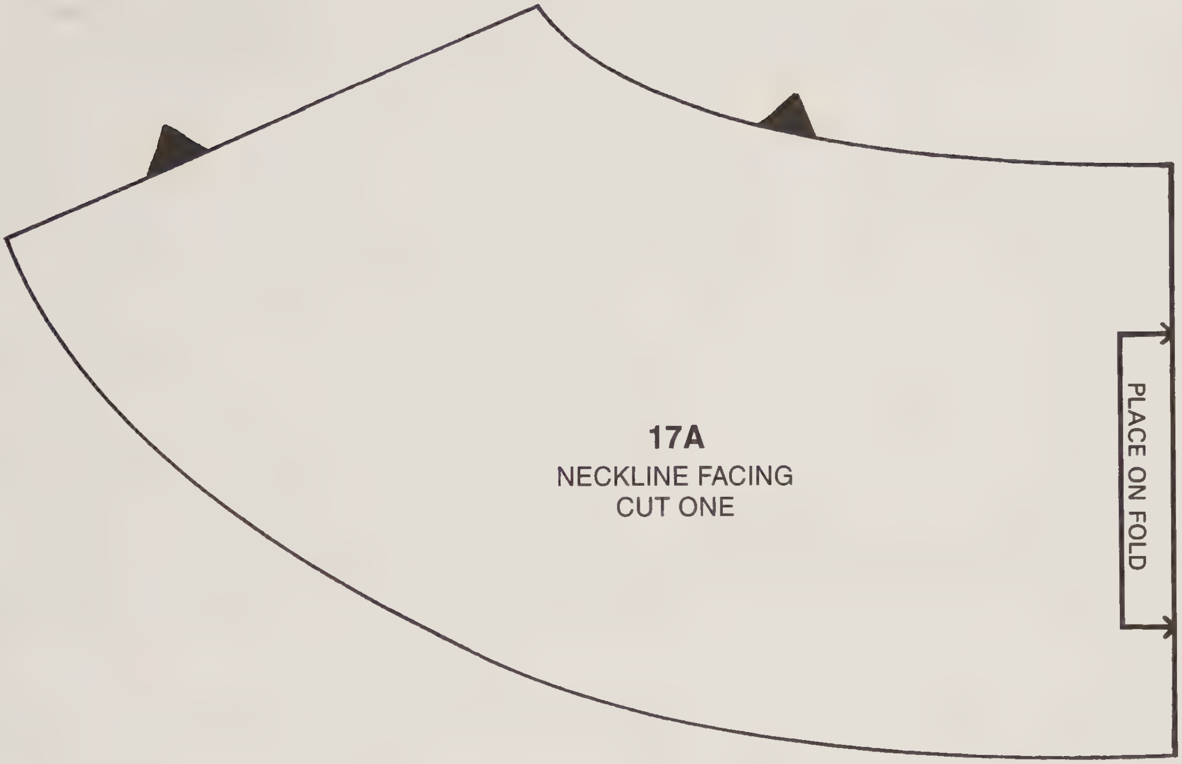
____

____

____

____

Pattern piece for Activity 17-2


17A
NECKLINE FACING
CUT ONE
PLACE ON FOLD

Lesson 18

Understitching

Objectives

This lesson will help you to

- explain the meaning of the sewing term *understitching*.
- prepare an understitched seam.

Word to Know

understitching

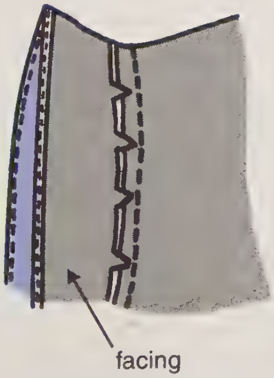
Gathering Information

You may have purchased a shirt with a facing that keeps rolling to the outside of the garment. Such construction can make clothing seem annoying and unattractive. Understitching can be used to avoid this problem.

What Is Understitching?

Understitching is a row of stitching that holds a seam allowance to one of the fabric pieces joined by the seam. It is mainly used on facings. The purpose of understitching is to keep the facing from rolling to the outside of the garment.

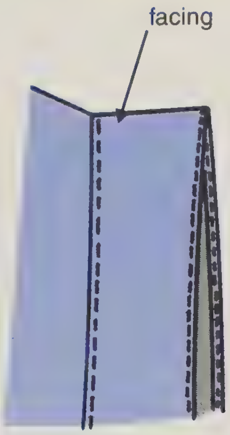
How to Understitch



Follow these steps:

1. Stitch the facing to the main garment piece.
2. Grade and clip the seam as required
3. Press the seam allowance toward the facing.

(Continued)



4. From the outside of the garment, stitch close to the seam on the facing side. You will be stitching through the facing and the seam allowance.
5. Press work when finished stitching.

Activity 18-1: Practicing Understitching

Supplies needed:

thread
shears
fabric
sewing machine
bobbin
pattern pieces 18A and 18B (page 211)

Cut out the pattern pieces from a fabric scrap. Clean finish the long unnotched edge of the facing piece. Place fabric pieces with right sides together and notches matching. Stitch a plain seam. Then understitch, following the directions in the "How to Understitch" box.

Name ______________________________

Date ____________________ Period ____________

Activity 18-2: Evaluating Learning

The understitched seam sample that you completed in Activity 18-1 will be evaluated using the chart below. Also, a space is provided for you to write a brief definition of *understitching*. Write the definition in your own words—what the term *understitching* means to you. Be prepared to discuss your work and your definition.

	Poor	Fair	Good	Excellent
Seam clipped and trimmed as needed.				
Seam pressed toward facing.				
Understitching attaches seam allowance to facing.				
Understitching is very close to seam.				
Stitching is secured.				
Threads have been clipped.				
All stitching is straight and even.				

In your own words, write a definition of *understitching*. Include in your definition how, why, and where understitching should be done.

____

____

____

____

____

____

____

____

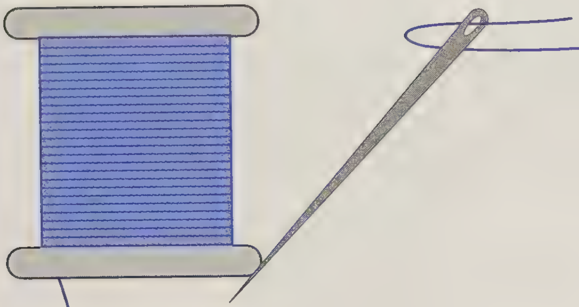
____

____

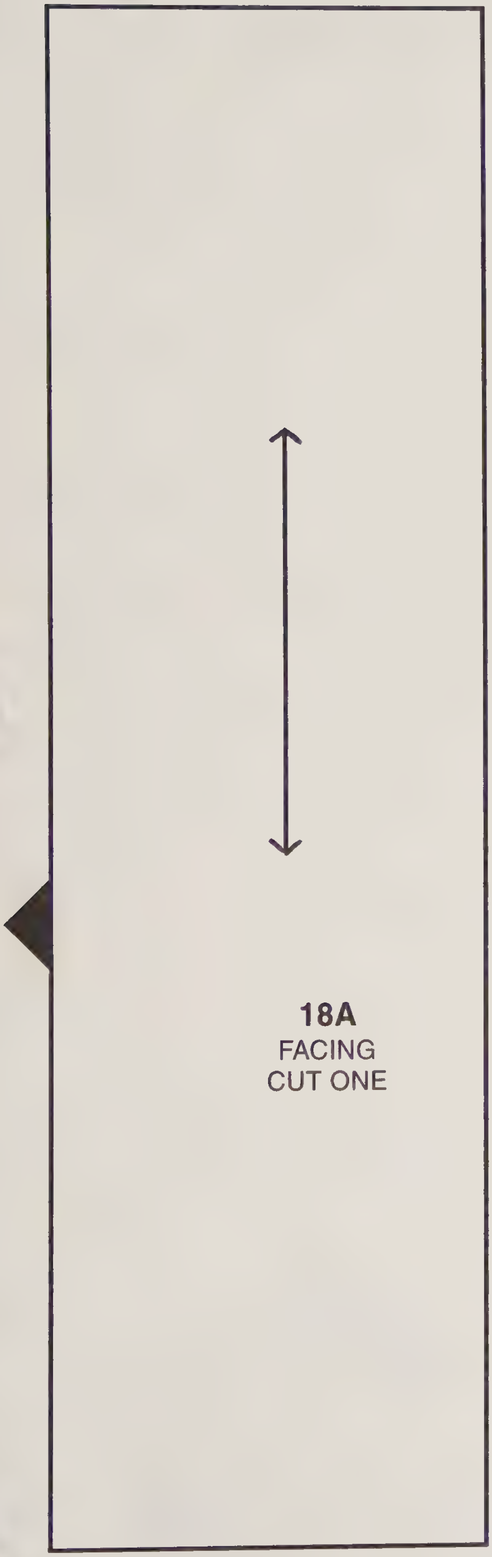
____

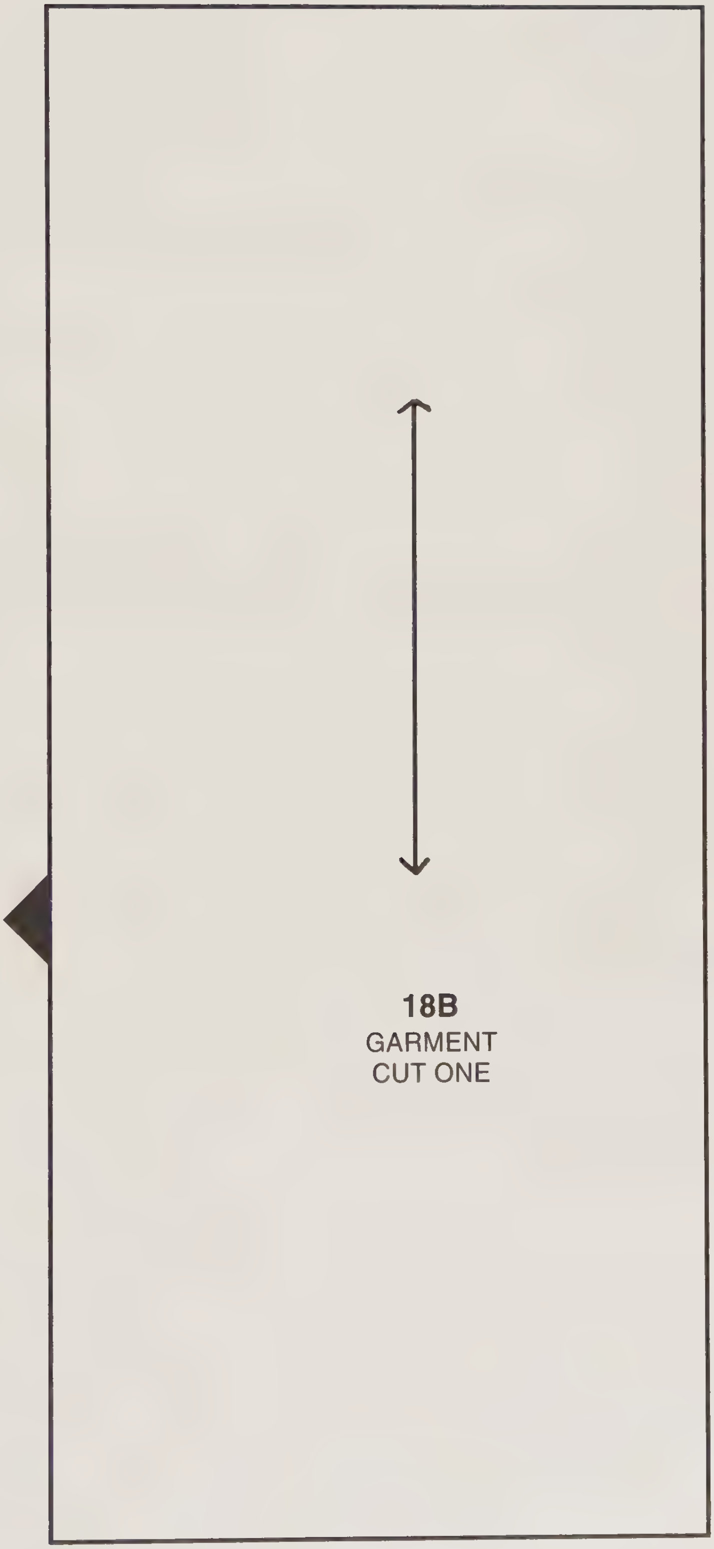
____

notes



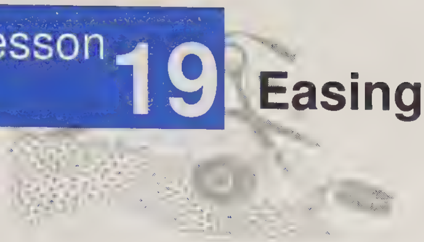
Pattern pieces for Activity 18-1


18A
FACING
CUT ONE


18B
GARMENT
CUT ONE

Lesson 19

Easing and Gathering



Objectives

This lesson will help you to

- explain the meanings of the sewing terms *easing* and *gathering*.
- practice easing and gathering.

Words to Know

easing
gathering

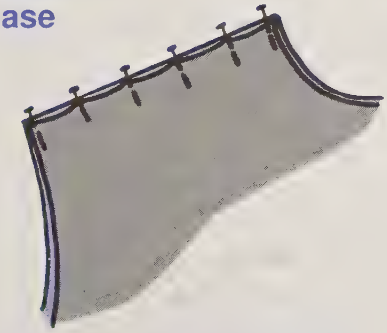
Gathering Information

Imagine a garment made only of straight pieces of fabric. It wouldn't be very comfortable—or very interesting. To give clothes a better fit and to add interest, fullness is often worked into a garment. Easing and gathering are the two main ways to add fullness.

What Is Easing?

Easing is making a larger piece of fabric fit with a smaller piece of fabric as a seam is sewn. It allows extra fabric to be provided at certain points on the body. For instance, extra fabric is allowed in the back shoulder to make room for the shoulder bone. The front shoulder does not need to have the same fullness. Therefore, the extra fabric in the back shoulder must be eased in with the lesser fabric of the front shoulder.

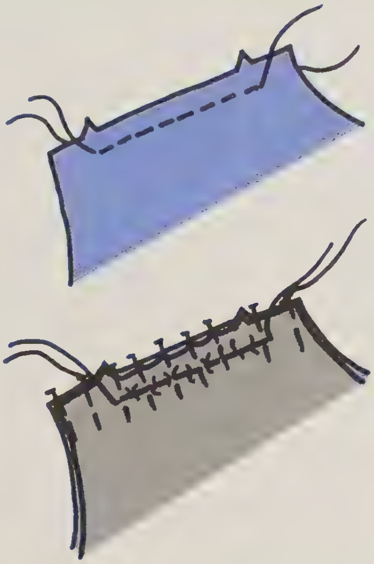
How to Ease



There are two methods for easing in fullness. The method you select will depend on the amount of fullness that must be eased.

Method 1. Select this method when you have only a small amount of fabric to ease. Begin by pinning the two edges of the fabric pieces together. Then distribute the remaining fabric evenly across the seam, pinning as you work. Place pins ½ inch apart to help hold the eased fabric in place. Stitch the seam by placing

(Continued)



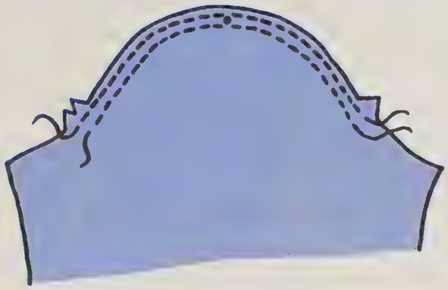
the side having the greatest amount of fullness toward the feed dog. Be sure the finished seam lies flat with no visible folds or gathers.

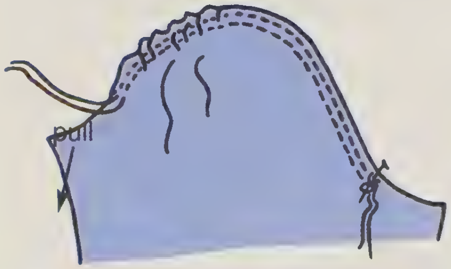
Method 2. Select this method when you have a greater amount of fullness to ease. Stitch a row of basting stitches along the seamline where the seam is to be eased. Pin the two edges of the fabric pieces together. Pull on the top thread of the basting stitches to distribute the fullness. Pin and stitch as directed for Method 1. Remove basting stitches.

What Is Gathering?

Gathering means to work in fullness. Generally, gathering is used to work in a greater amount of fullness than easing.

How to Gather





To gather, sew two rows of basting stitches across the area to be gathered. Stitch one row ½ inch from the edge of the fabric and the other row ¾ inch from the edge. The ¾ inch stitching will be removed later because it will appear on the outside of the garment. Do not backstitch. Also, leave "tails" on the thread at each end of the stitching row.

Never try to take a shortcut by using only one row of stitching. The two rows are needed to achieve even gathers.

After stitching, place a pin at one end of the stitches. Wrap the ends of the two threads around the pin securely. This will keep you from pulling the threads completely out of the fabric as you pull from the opposite end.

Now pull on the two top threads at the opposite end. With your other hand, help the fabric "gather up" along the threads. Adjust the gathers to the required length. Make sure the gathers are evenly distributed. Pin the gathered fabric to the flat piece. Pin and stitch the seam. Remove the ¾-inch row of basting stitches.

Helpful Sewing Hints

If threads break as you gather, consider the following methods:

- *Try using heavy-duty or buttonhole thread on the bottom.*
- *Try a zigzag aid. With the wrong side of your fabric up, take one stitch with the sewing machine. Pull the bobbin thread up through the fabric. Next pull both the bobbin thread and the top thread until they extend the length to be gathered. Stitch over the two threads with a medium zigzag, being careful not to stitch on the threads. Pull the threads to adjust the gathers. (A small cord or heavy-duty thread may be placed along the gathering line instead of using thread from the sewing machine.)*

Activity 19-1: Practicing Easing

Supplies needed:

thread
shears
fabric
sewing machine
bobbin
pattern pieces 19A and 19B (page 217)

Cut out the pattern pieces from a sewing scrap. One piece represents a front shoulder. The other represents a back shoulder. Pin and sew both pieces together along the notched edges, matching circles and following directions in the "How to Ease" box.

Activity 19-2: Practicing Gathering

Supplies needed:

thread
shears
fabric
sewing machine
bobbin
pattern pieces 19C and 19D (page 219)

Cut out the pieces from a fabric scrap. Gather fabric piece 19C to fit fabric piece 19D. Pin and sew both pieces together, matching circles and following directions in the "How to Gather" box.

Name ______________________________

Date ____________________ Period __________

Activity 19-3: Evaluating Learning

The easing and gathering samples you completed in Activities 19-1 and 19-2 will be evaluated using the form below. Also, in the space provided at the bottom of this page, write definitions of *easing* and *gathering*. Write the definitions in your own words—what *easing* and *gathering* mean to you.

Easing	Poor	Fair	Good	Excellent
There are no tucks or puckers.				
Seams fit together (ends of seams match).				
Threads are clipped.				
Seam is pressed.				

Gathering				
Two rows of gathering stitches were used—½ inch and ¾ inch from the seam edge. (This can be seen by whether or not gathers are even.) The ¾-inch row of stitching has been removed.				
Stitching is straight and even.				
Gathers are uniform and neat.				
Threads are clipped.				
Seam has been pressed.				

In your own words, write definitions of *easing* and *gathering*. Include in your definitions how each is done.

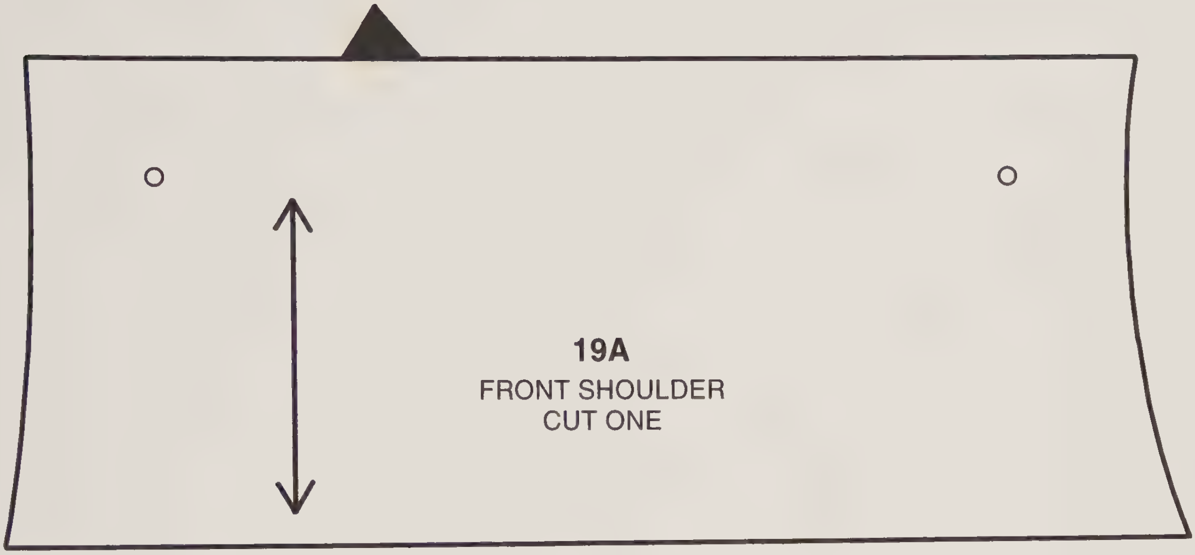
easing ____

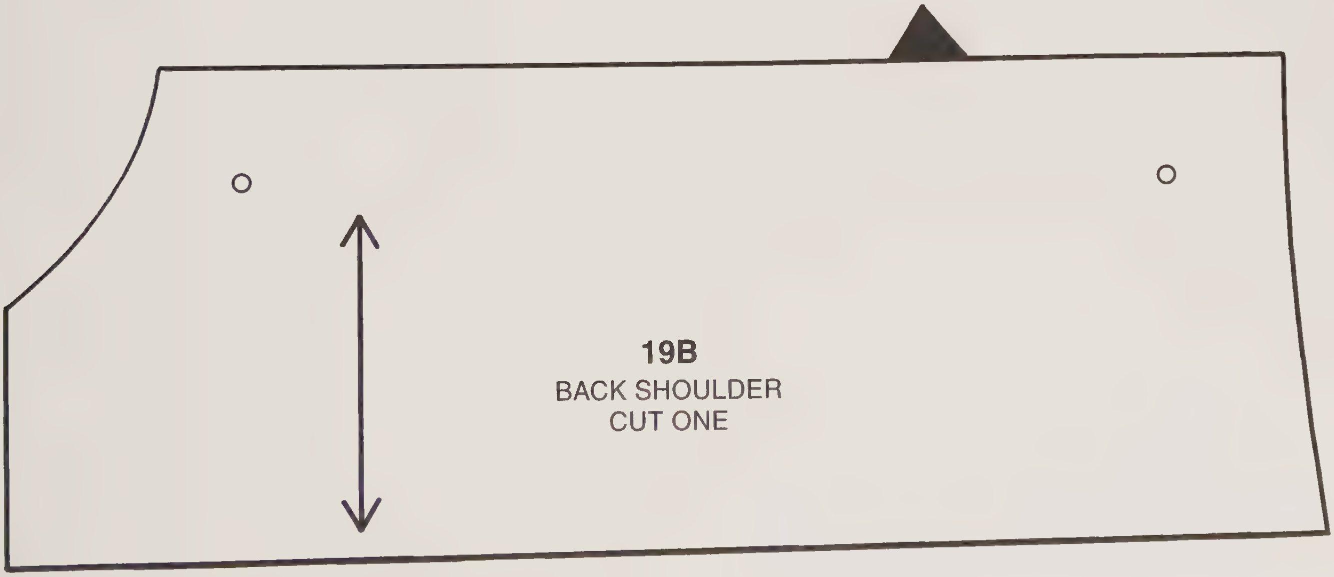
____

gathering ____

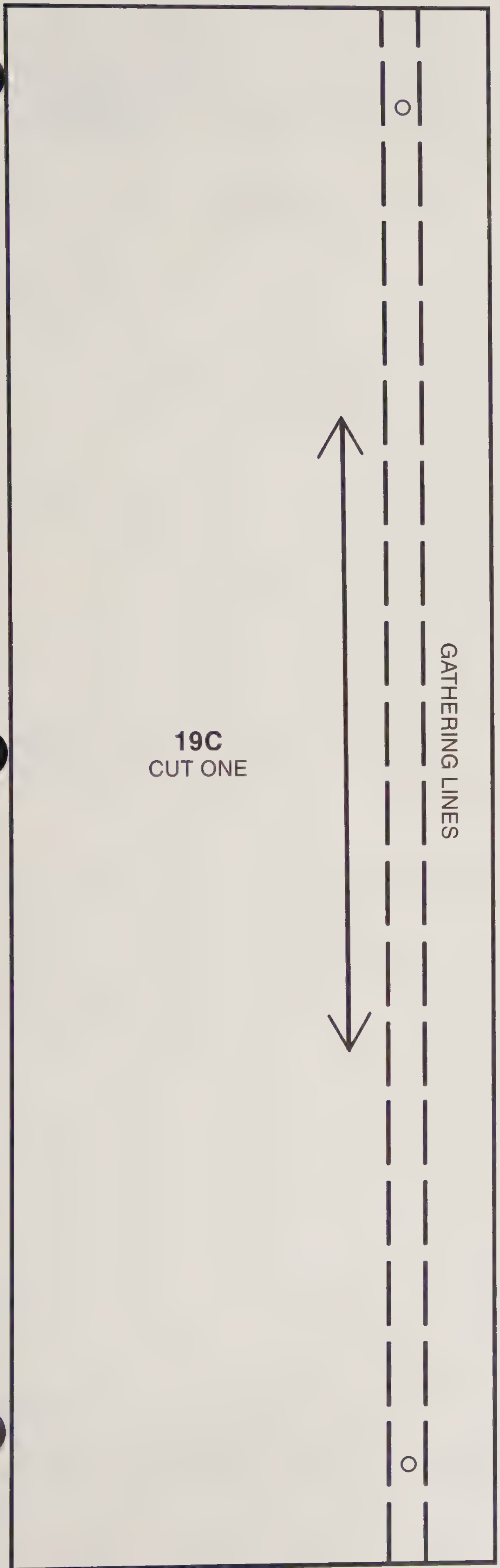
____

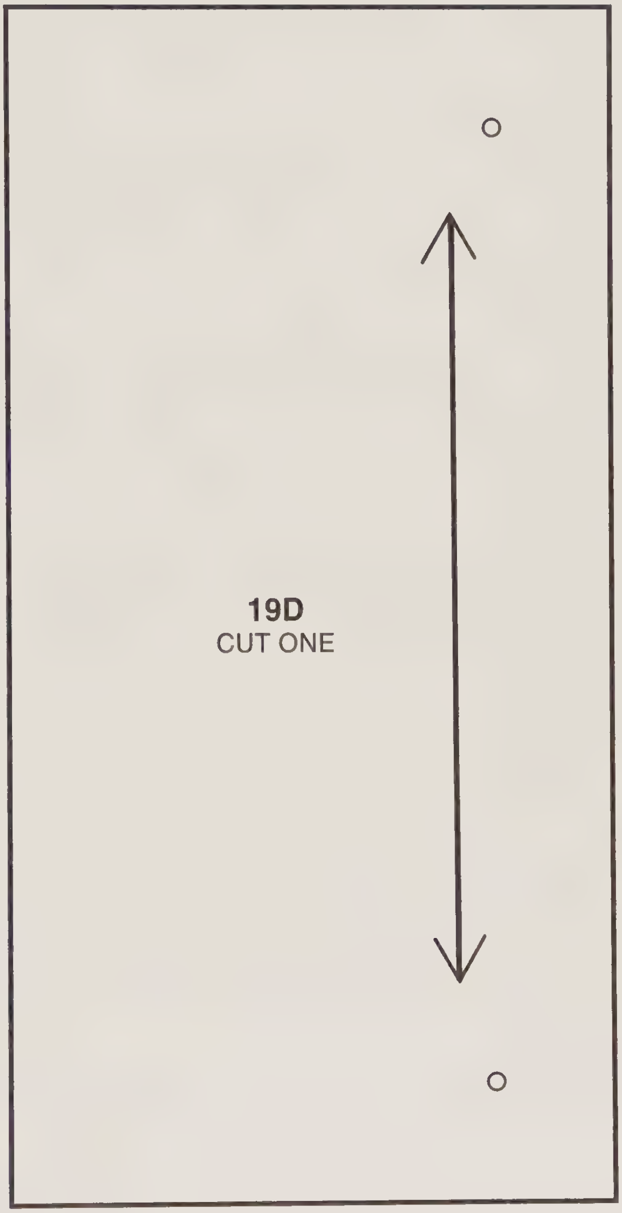
Pattern pieces for Activity 19-1

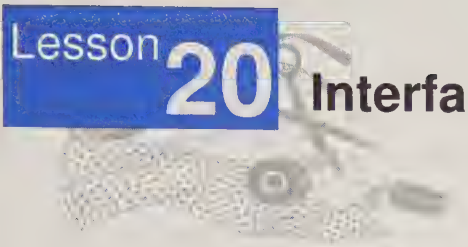

19A
FRONT SHOULDER
CUT ONE


19B
BACK SHOULDER
CUT ONE

Pattern pieces for Activity 19-2


19C
CUT ONE
GATHERING LINES





Lesson 20 Interfacing

Objectives

This lesson will help you to

- identify the various types of interfacing and when to use each type.
- select interfacing application techniques used for special results.
- determine where to use interfacing in a garment.

Words to Know

interfacing
woven interfacing
nonwoven interfacing
fusible interfacing
fusible knit interfacing
stretch interfacing
weft-insertion interfacing
bubbling

Gathering Information

Before interfacing fabrics were available, items such as metal hoops, corsets, and girdles were worn to achieve garment shape. Today, garments are shaped by a layer of interfacing fabric. Interfacing is placed in the areas where additional support is desired. Interfacing fabrics have the added value of comfort. This was never possible with corsets and metal hoops.

The earliest interfacings were woven from linen, burlap, horsehair, or goat's hair. Modern interfacing fabrics are largely constructed from manufactured fibers that are chemically bonded together.

What Is Interfacing?

Interfacing is a layer of fabric placed between the facing and the fashion fabric. It is used to achieve one or more of the following purposes:

- To create a fashion image or silhouette.
- To increase the life of the garment.
- To add support to stress areas.
- To emphasize detail areas of the garment.

The following areas of a garment should almost always be interfaced: collars, cuffs, plackets, waistbands, and button and buttonhole areas. Sometimes hems, yokes, pockets, hatbands, and craft projects require interfacing as well.

Types of Interfacing

Choosing interfacing can be very confusing. However, by knowing the classifications into which the many types of interfacings fall, the task will be easier.

Woven interfacings are constructed by interlacing yarns at right angles. These interfacings have a grainline, and pattern pieces must be cut out on the grain. This type of interfacing is usually nonfusible, though a few fusible wovens are available.

Uses. Woven interfacings are very versatile. They are especially good for tailored garments and for places where fusible interfacings are not appropriate.

Characteristics. Stable control, crisp finish, available in a variety of weights, generally more pliable than nonwovens or fusibles.

Nonwoven interfacing fabrics are constructed by making use of chemical binders. Some nonwoven interfacings have what appears to be a grain. If a grain is apparent, pattern pieces will need to be cut out on grain. Nonwovens may be either fusible or nonfusible.

Uses. A wide variety of uses is possible.

Characteristics. Stable control, crisp finish, available in a wide variety of weights. If nonfusible, may crease inside collars and other large areas.

Fusible interfacing has a bonding material applied to one surface. Therefore it may be fused rather than basted to the fashion fabric. This interfacing may be woven or nonwoven. It may or may not have a grain.

Uses. A wide variety of uses is possible.

Characteristics. Easy to apply, available in a wide variety of weights, tends to stiffen slightly once applied. May bubble on lightweight fabric, corduroy, or velvet.

Fusible knit interfacing is a knit interfacing with a fusible backing. As with any knit fabric, this interfacing has a grain. All pattern pieces must be cut out on the straight of grain. Generally, this type of interfacing is fused to the fashion fabric and treated as one piece with it.

(Continued)

Uses. Fusible knit interfacings are used as underlining for knits and lightweight wovens. They may be used to strengthen stress areas such as knees, seats, and elbows.

Characteristics. Fusible, provides for soft shaping, stretchable.

Stretch interfacings may stretch in one of three ways. One type stretches in one direction. It should be cut out as if there is a grainline. A second type stretches in two directions. This should be cut out as if there is a grainline. A third type, called "all-bias interfacing," stretches in all directions. It may be cut out in any direction.

Uses. Good for knit fabrics.

Characteristics. Stretches, may be fusible or nonfusible.

Weft-insertion interfacing has knitted warp yarns with weft yarns woven in. It has a grain so pattern pieces must be cut out on the grain. The interfacing has the softness of a knit and the stability of a woven. It is preshrunk, has a flatter finish, eliminates bulk, and does not pill or shred after laundering.

Uses. May be used where soft tailoring is desired.

Characteristics. Has a flatter finish, eliminates bulk, preshrunk.

How to Select Interfacing

Choosing the right weight. Interfacings come in many different weights to suit many purposes. To determine which weight to use for your fabric, test the hand, or feel. Place the interfacing fabric and the fashion fabric together. In most cases, the interfacing should be slightly lighter in weight than the fashion fabric. You may use different weights in various parts of the same garment depending upon the results you want.

Knit fabrics. Certain areas in knit garments need to be stabilized to provide body and support and to prevent the garment from stretching too much. Areas that may need more stability are hems, facings, waistbands, buttonholes, placket openings, zipper edges, pockets, collars and cuffs.

(Continued)

When sewing with a stable knit, always use interfacing where called for on the pattern instruction sheet. Patterns designed for stretch knits generally have fewer construction details and will have less need for interfacing.

For stabilizing garment areas, use interfacings that provide lengthwise stability and some crosswise stretch. Also try the tricot knit and weft-insertion interfacings. For knits that don't tolerate heat, use a sew-in interfacing.

Sheer fabrics. When interfacing sheer fabrics, organza or chiffon may be used as the interfacing. Apply these fabrics just as you would any other interfacing fabric.

Preshrinking Interfacing Fabrics

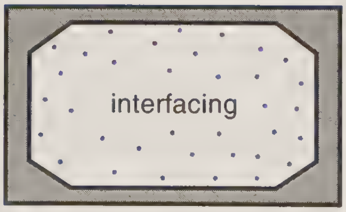
Although there are exceptions, most interfacing fabrics do not require preshrinking. Check the end of the interfacing bolt when you make your purchase.

Always be sure that the fashion fabric has been preshrunk, if necessary, before applying the interfacing.

How to Apply Interfacing

To apply fusible interfacing, follow these steps:

1. Always pretest fusible interfacing on a scrap of fabric. Fusible interfacings cannot be used on all fashion fabrics.
2. Trim off ½ inch on all edges of the interfacing piece. This decreases the bulk in the seam allowance. Also, trim the corners.
3. Position interfacing on the garment piece and cover with a damp press cloth.
4. Press by lifting the iron up and placing it down on the interfacing. Count to 10 slowly each time you put the iron down.
5. Check for bonding. You may have to repeat the process.



(Continued)

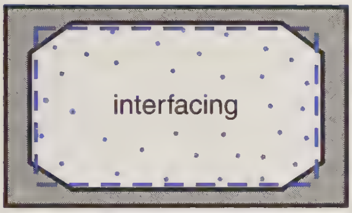
Bubbling. After applying a fusible interfacing to certain fabrics, ***bubbling*** may occur. This is the appearance of small bubbles on the surface of the fabric. This is especially common on corduroy, velvet, velveteen, and lightweight fabric. The following situations may cause bubbling:

- Steam was insufficient.
- Fashion fabric was not preshrunk.
- Interfacing was ironed rather than pressed on to the fabric.
- Interfacing is too heavy for the fabric.
- Interfacing is too spongy for the fabric.

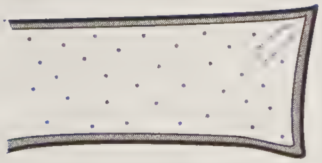
To prevent this problem for corduroy, velvet, and velveteen fabrics, try cutting along the crosswise grain instead of the lengthwise grain of interfacing. This is called "reversing the grainline." This may help because the fabrics will not shrink on the crosswise grain, but the interfacing fabric will have slight shrinkage.

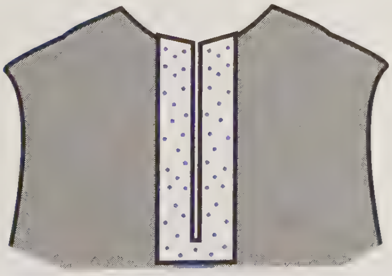
To apply nonfusible interfacing, follow these steps:

1. Pin the interfacing to the fashion fabric. Trim corners diagonally.
2. Stitch the interfacing to fabric.
3. Trim the interfacing close to the stitching line.



How to Use Interfacing



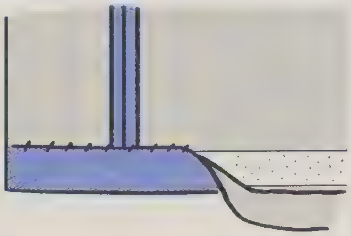


Pockets. To eliminate sagging pockets, the entire pocket may be interfaced. Trim away seam allowances on the interfacing. Fuse the interfacing to the pocket piece. For even greater stability, the grainline of the interfacing may be reversed.

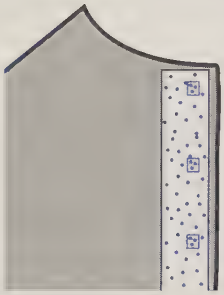
Collar stays. A convenient way to secure collar stays is to place the stay between the collar piece and the interfacing. Fuse the interfacing over the top of the stay.

Zippers. Applying a zipper to a bias-cut edge or to knit fabric may result in rippling. To prevent this, apply a strip of interfacing along the seam where the zipper is to be inserted.

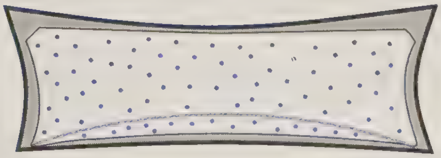
(Continued)



Hems. For some fabrics and garments, you may wish to provide greater stability in the hem area. To do this, apply a strip of interfacing the width of the hem along the hemline. This will give shape and smoothness to the hem.

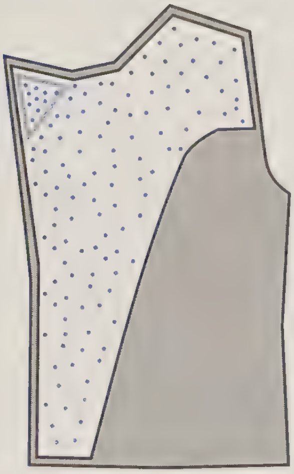


Buttons and buttonholes. Buttonholes that are not interfaced may have the appearance of "fish lips." To avoid this look, apply interfacing under buttons and buttonholes as usual. Under the buttonholes place another small piece of interfacing. For this little piece, change the grainline of the interfacing to run the opposite direction.



Collar roll line. Interface the collar using a collar interfacing piece that is on the bias. To find the bias of the interfacing fabric, fold the selvage at a 90 degree angle. Place the grainline arrow of the collar on the bias edge.

Cut an additional piece of interfacing to fit from the roll line to the neckline. Change the grainline for stability. The grain should run from the neck to the roll line. Press on top of the first interfacing. This process will allow the collar to roll rather than crack.



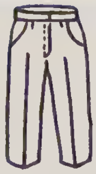
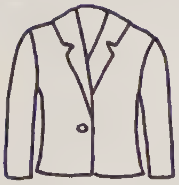
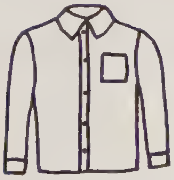
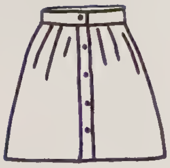
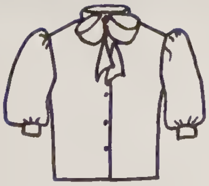
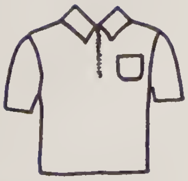
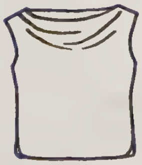
Lapel roll line. Cut a piece of interfacing from the point of the lapel to the roll line. Fuse this piece of interfacing on top of the interfacing piece called for by the instruction sheet. The second piece of interfacing should be cut out on the same grainline as the main lapel interfacing. Fold the lapel and pin to the pressing ham. Steam and let dry before removing.

Name ______________________________

Date ________________ Period __________

Activity 20-1: Practicing Making Decisions About Interfacing

Your teacher will provide you with fabric swatches for each of the garments illustrated below. Attach the swatch to the space in the fabric column. Then fill in the information requested.

Garment	Fabric	Type of Interfacing	Areas to Be Interfaced	Special Application Techniques Required
1. 				
2. 				
3. 				
4. 				
5. 				
6. 				
7. 				

Name ______________________

Date ______________ Period ________

Activity 20-2: Evaluating Learning

Read over the following situations and respond to the questions asked.

Situation #1 You have just applied a lightweight fusible interfacing to a lightweight fabric. You have done this on a scrap of fabric. Small bubbles have appeared on the surface of the fabric.

1. What may have caused the problem?

____

____

____

2. What will you do now?

____

____

____

Situation #2 You are making a shirt from a medium-weight cotton/polyester fabric. The instruction sheet does not tell you to use interfacing.

3. Will you use interfacing anyway?

____

4. If so, what areas of the shirt will you interface?

____

Situation #3 A friend is making pants from a medium-weight fabric. Your friend does *not* want to bother interfacing the waistband.

5. What reasons could you give your friend for not skipping this step?

____

____

____

(Continued)

Name ____

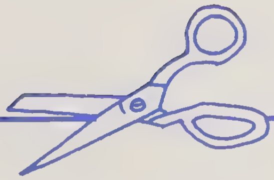
Situation #4 You are purchasing the interfacing to go with your fashion fabric. The sales clerk has shown you a number of fusible and nonfusible interfacings of varying weights.

6. How will you make your decision as to which one to purchase?

Situation #5 You have borrowed a piece of interfacing from another person. It appears to be the correct weight for your fabric, so you have decided to go ahead and use it. You are ready to cut out your interfacing pieces.

7. How do you tell if the interfacing has a grain?

8. What guidelines would you use to determine which direction to place the pattern pieces on the interfacing fabric?

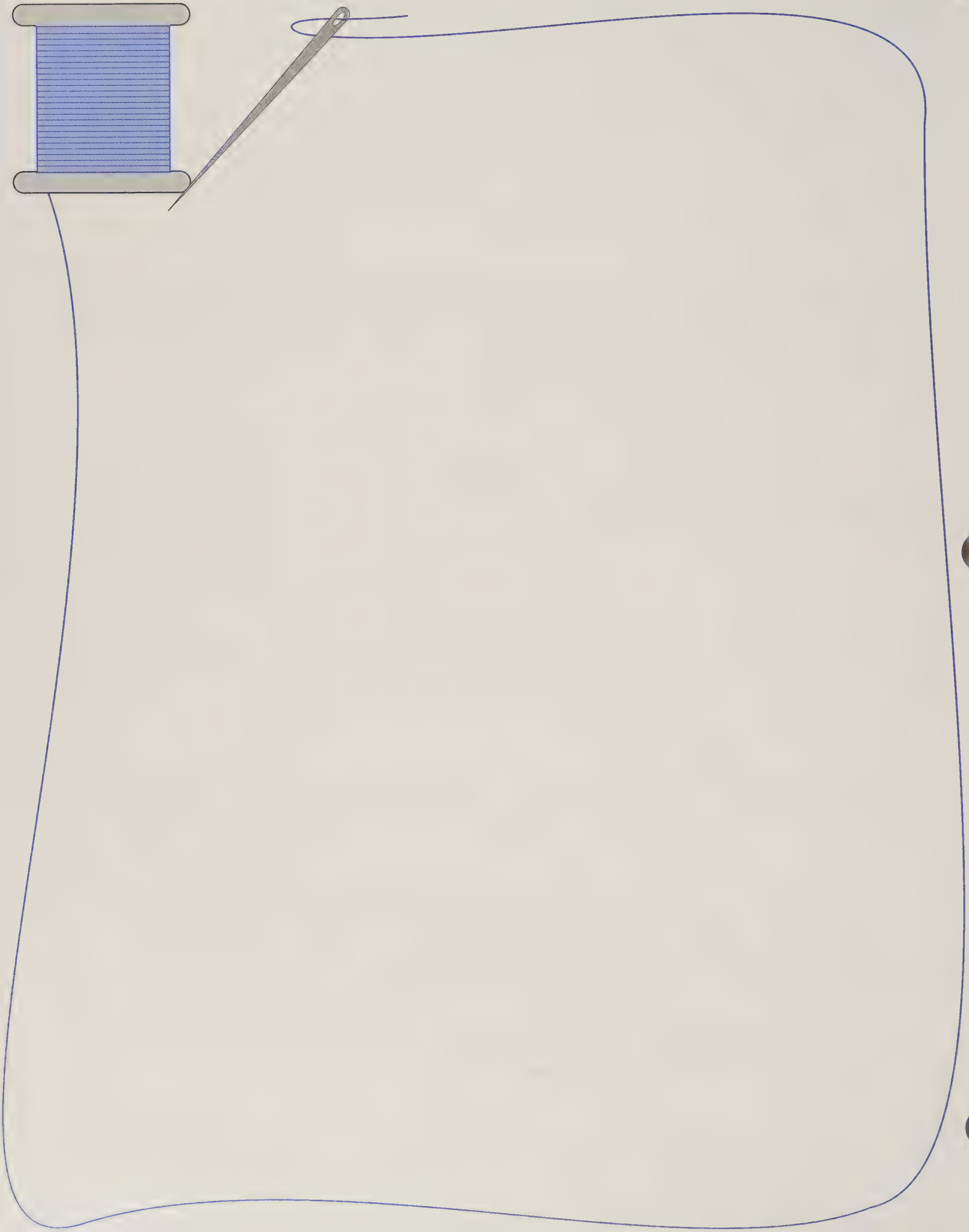


Shortcuts

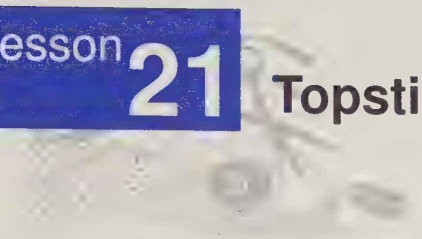
Save time sewing by making wise use of your time when it comes to buying and using interfacing. Begin by purchasing an assortment of interfacings to have on hand. A single garment may require more than one type or weight of interfacing. By having a variety of interfacings on hand, you will be ready for any interfacing need that may arise.

Further time savings can be made by cutting out all interfacing pieces at one time. Save needless interruptions by fusing all the interfacing pieces in a batch. Do your fusing before you take a stitch.

notes



Lesson 21 Topstitching



Objectives

This lesson will help you to

- identify various topstitching techniques.
- make decisions about topstitching on various types of fabrics.
- practice topstitching on various types of fabrics.

Words to Know

topstitching
edge stitching

Gathering Information

Topstitching is a line of stitching on the outside of a garment generally for a purpose of decoration. Topstitching usually gives the garment a more tailored appearance. There is much variation in how topstitching can be done. For instance, variation can occur in the number of rows of stitching, the distance of the stitching from the edge of the garment, and the stitch length. This lesson will help you to make choices about how to topstitch.

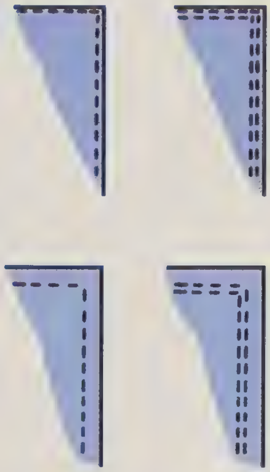
Selecting Thread

Single and double threads, buttonhole twist, and textured and metallic threads may all be used for topstitching. Thick or textured threads are generally used only as the top thread in the sewing machine.

To use a double thread, place two thread spools on your machine. Thread your machine as usual, holding the two threads together as you bring them through the guides and needle eye.

When using thick and/or textured thread, use a large-eyed machine needle. Using a metalfil or metallica needle will help prevent shredding the thread. Also, increase stitch length for a more attractive stitch. Do not attempt to backstitch. Instead, pull the needle thread through to the underside of the fabric at the first and last stitch. Knot the needle and bobbin threads together by hand.

Making Stitching Choices



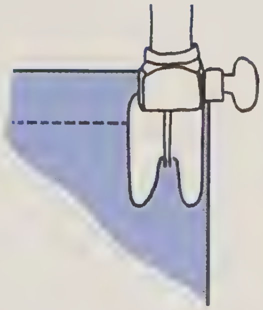
Topstitching is varied by changing the number of rows of stitching. Changing stitch length and the distance of stitching from the edge also creates different looks. Your instruction sheet may give you suggestions about how and where to topstitch your garment. However, do not hesitate to make your own topstitching decisions.

The stitch length you select will depend upon the weight and texture of your fabric. It will also depend on the look you want. Generally, heavier or more textured fabrics require a larger stitch length. Practice on a scrap of your garment fabric to determine the stitch length that will look the best.

The number of stitching rows and the distance you stitch from the garment edge will depend upon your fabric and the garment design. There are no rules for making these choices. Use your own sense of good design.

An excellent source for topstitching ideas is professionally designed garments. As you look at clothing, analyze the garments for style, fabric design and weight, and topstitching techniques. By trying to imitate techniques used by clothing designers, you can have a more professional looking garment.

Stitching Guides

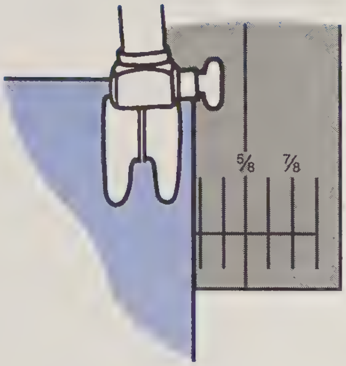


To achieve straight topstitching, try one of the following methods:

Method 1. Use the presser foot as a guide. Do this by placing the presser foot along the edge of the garment piece.

(Continued)

Stitching Guides



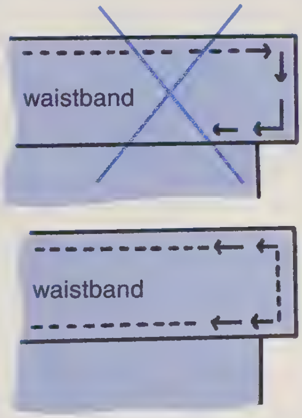
Method 2. Use the stitching guidelines on the throat plate as a guide. If your machine does not have guidelines, make your own with tape.

Method 3. A special topstitching tape can be applied to the garment. Lines on the tape indicate where to stitch.

Method 4. Draw your own line with a chalk pencil or removable marking pen. Test the marking method on a fabric scrap before using it on your garment. You will want to be sure the marking is not permanent.

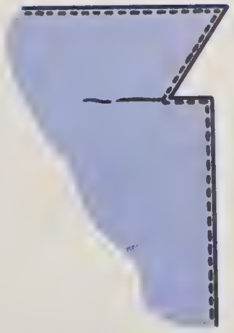
Method 5. Use clear, plastic topstitching guides. These guides have small projections on the underside that grip the fabric and prevent them from slipping. Plastic guides are available in various shapes and are marked for different seam widths. There is even one in the shape of a front curved zipper fly.

Directional Stitching



When topstitching, follow the general guidelines for directional stitching. (See Lesson 13, “Staystitching,” and Lesson 14, “Seams.”) For instance, stitch both rows of a zipper from the bottom of the zipper to the top. Stitch both topstitching rows on a waistband in the same direction. Directional stitching will prevent puckering, which is caused by stretching the fabric in opposite directions. If the fabric puckers when stitched from one direction, try stitching from the opposite direction.

Edge Stitching



Your pattern instruction sheet may tell you to edge stitch. Edge stitching is a form of topstitching. ***Edge stitching*** always means to stitch close to the finished edge of the garment piece.

How to Topstitch

The following steps will help you produce attractive topstitching:

1. Decide whether topstitching will add to the appearance of your garment.
2. Decide what type of thread you wish to use.
3. Adjust the tension and stitch length as needed to get the look you want.
4. Always practice topstitching on a scrap of fabric from the garment you are constructing. Use as many layers of fabric in your practice sample as you will be sewing through on the garment.
5. As you topstitch, stitch slowly but at an even pace. Starting and stopping can cause uneven stitching. If you must stop stitching, be sure to leave the needle down in the fabric. This will keep the fabric from slipping. This procedure should also be followed when turning a corner. Stitch to the corner and stop with the needle down in the fabric. Pivot the fabric and begin stitching in the new direction.

Name ______________________________

Date ____________________ Period __________

Activity 21-1: Making Topstitching Choices

Supplies needed:

- scrap of medium-weight suiting
- scrap of shirt-weight fabric
- scrap of single knit fabric
- shears
- thread
- sewing machine
- bobbin and case

In Activity 21-2, you will be topstitching on three types of fabric. However, you must first make choices about the best topstitching technique to use on each fabric. This activity will help you make those decisions by giving you a chance to experiment on the fabric scraps.

Practice topstitching on half of the scraps given to you. (Save half of your scraps for Activity 21-2.) Experiment by adjusting the stitch length, using thread variations, and using variations in number of rows and stitching distance from the edge. Stitch on the same number of fabric layers that you would normally find when topstitching on a garment. After you have experimented, record your topstitching decisions in the space provided below. As you make your choices, don't forget to consider the garment design for which the fabric will be used.

	Topstitching Choices				
	Thread	Tension	Stitch Length	Number of Rows	Location of Rows from Edge
Fabric #1 Garment: jacket Fabric: medium-weight suiting					
Fabric #2 Garment: shirt Fabric: medium-shirt weight					
Fabric #3 Garment: shirt Fabric: single knit					

Name ______________________________

Date ____________________ Period ____________

Activity 21-2: Practicing Topstitching

Supplies needed:

- fabric scraps from Activity 21-1
- sewing machine
- shears
- thread
- pins
- bobbin and case

Cut two 3- by 5-inch pieces of fabric from each of the three fabrics used in Activity 21-1. Place the right sides of each two pieces together and stitch a ⅝-inch seam along one side. Grade the seam and fold with wrong sides together. Press along the seamline. Topstitch each seam according to the decisions you made in Activity 21-1.

Name ______________________________

Date ____________________ Period ____________

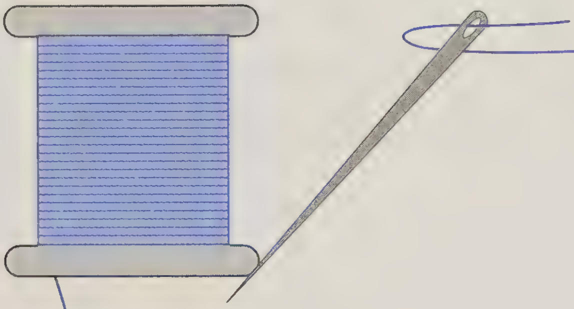
Activity 21-3: Evaluating Learning

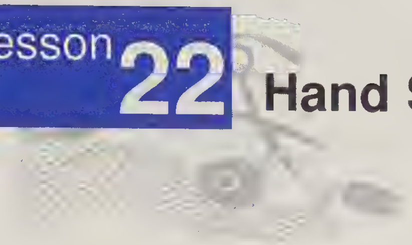
The topstitching samples you completed in Activity 21-2 will be evaluated using the following scale: E—Excellent, G—Good, F—Fair, P—Poor. The appropriate letter will be placed in the spaces provided below. Also answer the question at the bottom of the page.

	Fabric 1	Fabric 2	Fabric 3
Topstitching is an even distance from the edge.			
Appropriate stitch length was used.			
Correct machine tension for fabric was used.			
Threads are clipped.			

What factors should be considered when determining when and/or how to topstitch a garment? List as many ideas as you can.

notes





Lesson 22 Hand Stitching

Objectives

This lesson will help you to

- identify various hand stitches and when to use each.
- tie a knot in thread.
- fasten off the thread at the end of a row of hand stitching.
- practice making a variety of hand stitches.

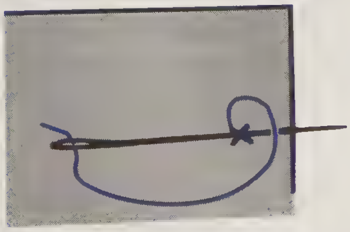
Words to Know

basting stitch
overcast stitch
hemming stitch
slip stitch
catch stitch
buttonhole stitch
rolled-hem stitch

Gathering Information

There are many hand stitches. Sometimes more than one stitch will work for your need. Other times, a specific stitch will work best for a certain purpose. This activity will help you to make decisions about which hand stitch to use.

How to Begin and End Hand Stitching

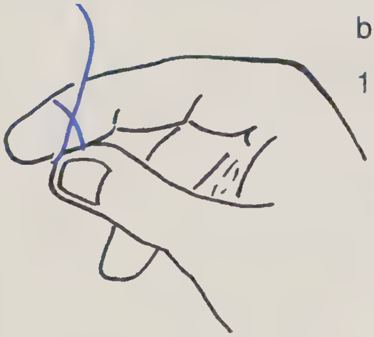


A fastening stitch can be used to secure the thread either at the beginning or ending of a row of stitching.

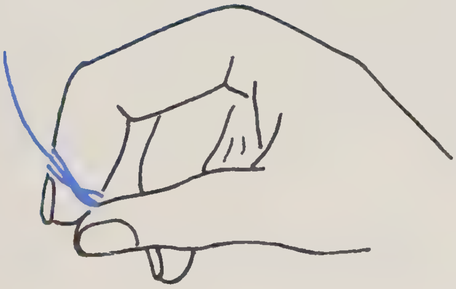
Take a small stitch but leave a thread loop rather than pulling the stitch tight. Run the needle through the loop. Then pull the stitch tight. Repeat several times in the same position.

(Continued)

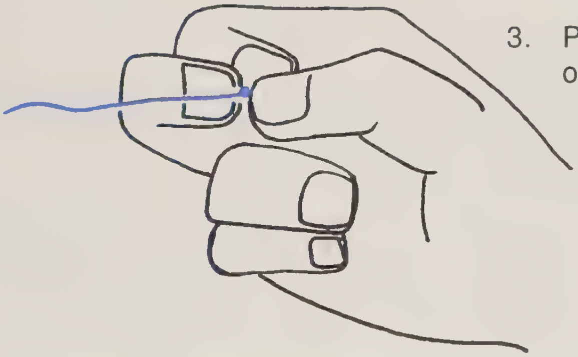
You can use a knot to secure thread at the beginning of a row. To knot, follow these steps:



1. Wrap thread around the index finger once. For a larger knot, wrap thread around two or three times.

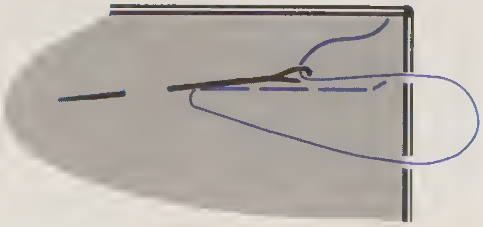


2. Roll thread between fingers until it rolls off the end of the finger. However, do not let loose of the thread.



3. Place the middle finger over the thread. Pull on the thread to form the knot.

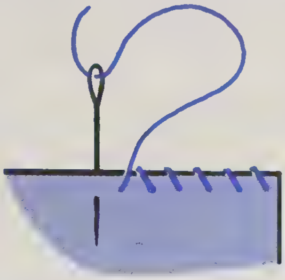
How to Hand Stitch



Basting stitch. Used to temporarily hold layers of fabric together.

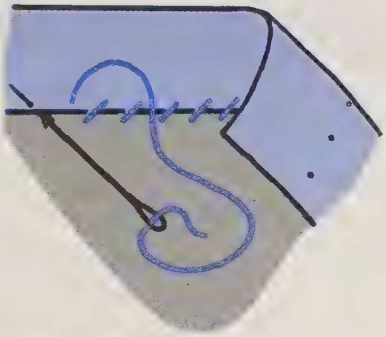
With a knotted thread, weave the needle in and out of the fabric. The length of the stitch may vary depending on the fabric being used.

(Continued)



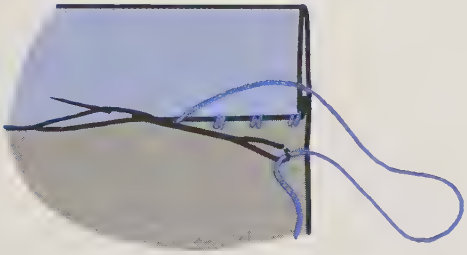
Overcast stitch. Used to prevent a flat, raw edge from raveling.

Bring the needle through the fabric about ¼ inch down from the top edge. Pull thread through. Move ¼ inch to the left and repeat the stitch. Keep stitches evenly spaced.



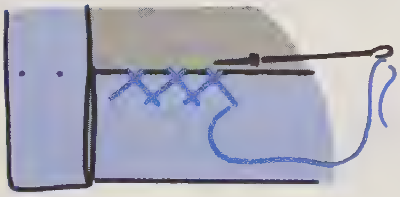
Hemming stitch. Used to stitch down an edge that has been turned under. May also be used on a flat edge (one that has not been turned under).

Pick up one or two threads of the garment fabric close to the hem. Push the needle up through the hem. Pull the thread through. Move ¼ inch to the left and repeat the stitch.



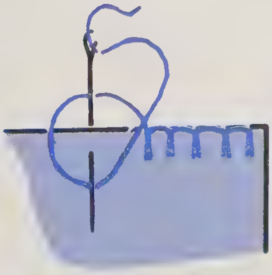
Slip stitch. Used for a hem edge that has been turned under.

With a knotted thread, pick up one or two threads of the garment fabric close to the hem. Just above this stitch, slide the needle through the folded edge of the fabric for about ¼ inch. Repeat. This stitch should not be visible.



Catch stitch. Used to stitch a flat edge.

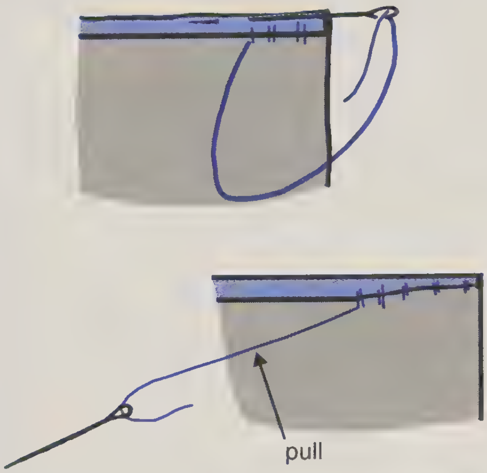
Work from left to right. Pick up one or two threads on the garment directly above the hem. Pull the thread through the fabric. Move ¼ inch to the right. Take a small stitch in the hem only, ⅛ inch down from the edge of the hem. Pull thread through. Move to the right and repeat stitch.



Buttonhole stitch (blanket stitch). Used to bind a raw edge.

Place the needle through the fabric about ¼ inch below the raw edge. Do not pull the needle through. Loop the thread around the needle as shown. Pull the needle through the fabric. Move to the left and repeat the stitch. The distance the needle is inserted from the raw edge and the distance between stitches will depend on the sewing task.

(Continued)



Rolled-hem stitch. Used to make a small hem on sheer fabric.

With the hem turned over ⅛ inch, take a stitch ¼ inch long in the hem. Pull the stitch through. Take another stitch, picking up one or two threads on the main fabric. Pull through. Move to the left 1/16 of an inch and repeat stitch. After repeating the stitch for about an inch, pull on the thread and the fabric will roll over on itself forming a very small rolled hem.

Activity 22-1: Practicing Hand Stitching

Supplies needed

- fabric swatches (see below)
- needle
- pins
- shears
- thread

This activity will help you practice making various hand stitches. Your teacher will tell you which of the hand stitches you are to practice. For each hand stitch you are to make, begin by preparing a fabric swatch as directed in the chart below. Complete each hand stitch as directed in the lesson. As you do each stitch, practice making a knot to secure thread at the beginning of the row of stitching. Also practice making a fastening stitch to secure thread at the end of the row.

Stitch to Be Completed	Swatch Preparation
Basting stitch	Cut two 3- by 4-inch swatches of any weight fabric and place right sides together. Stitch through both layers.
Overcast stitch Buttonhole (blanket) stitch	For each stitch, cut one 3- by 4-inch swatch of medium- to heavyweight fabric. Stitch along raw edge.
Hemming stitch Slip stitch	For each stitch, cut one 3- by 4-inch swatch of light- to medium-weight fabric. Press under ¼ inch on a long edge. Fold up 1 inch on the same long edge. Stitch to hold the turned-under edge in place.
Catch stitch	Cut one 3- by 4-inch swatch of medium- to heavyweight fabric. Fold up 1 inch on one long edge. Stitch to hold the flat edge in place.
Rolled-hem stitch	Cut one 3- by 6-inch swatch of sheer fabric. Stitch to form a small hem.

Name ______________________________

Date __________________ Period ____________

Activity 22-2: Choosing a Stitch

Fill in the chart below stating which stitch you would use for each of the sewing tasks given. Use the information provided earlier to help you complete this activity.

Sewing Task	Stitch Choice	Reason for Your Choice
1. Hem a turned under edge on medium-weight fabric that may ravel slightly		
2. Hem a sheer fabric		
3. Finish a seam edge on heavyweight fabric that will ravel		
4. Hem heavyweight fabric that will not ravel		
5. Temporarily hold a seam on slippery fabric		
6. Stitch around a pocket on medium-weight fabric		

Name ______________________________

Date ________________ Period __________

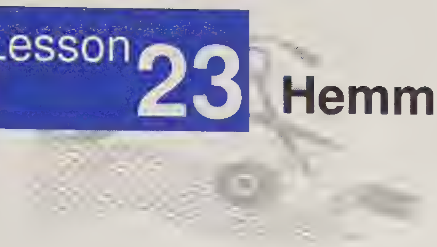
Activity 22-3: Evaluating Learning

The form below will be used to evaluate the hand stitching samples you completed in Activity 22-1. The hand stitches will be rated using the following scale: E—Excellent, G—Good, F—Fair, P—Poor. The appropriate letters will be placed in the spaces provided below. Also, answer the question at the bottom of this page.

	Basting Stitch	Overcast Stitch	Hemming Stitch	Slip Stitch	Catch Stitch	Buttonhole (Blanket) Stitch	Rolled-Hem Stitch
Stitches do not show on the outside of the sample, if applicable.							
Stitches are evenly spaced.							
Knot at end of thread is hidden under the edge of hem, if applicable.							
Fastening stitch is correctly and neatly done, if applicable.							
Stitches are not too far apart or too close together.							
Sample looks very neat.							

What criteria do you use to determine which hand stitch to use in a given situation? List as many ideas as you can.

Lesson 23 Hemming Methods



Objectives

This lesson will help you to

- identify the various hemming methods available.
- select the appropriate hemming method to use for various types of fabric.
- construct various types of hems.

Words to Know

turned-and-stitched hem
eased hem
taped hem
stitched-and-pinked hem
serged (pine-stitched or zigzagged) hem
double-stitched hem
machine-blind hem

Gathering Information

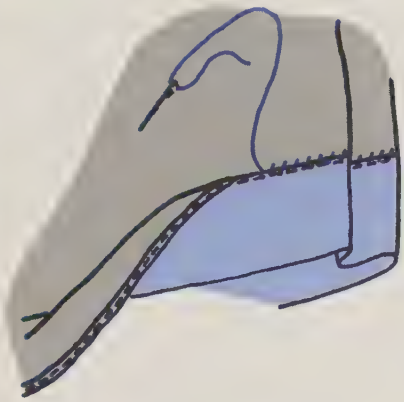
An uneven, bulky hem can destroy the appearance of a garment. On the other hand, a properly constructed hem will give your garment a professional look. It will make you look your best when the garment is worn. To achieve that professional-looking hem, you must make a number of choices. This lesson will give you important information that will help you to make those choices.

How to Choose a Hem

When constructing a hem, many hemming methods are available from which to select. The method you select will depend on the weight of your fabric and the degree that it ravels. You must choose a method because your pattern may not provide instructions to suit your specific needs. Do not be afraid to vary from the pattern instruction sheet when it comes to constructing the hem. Keep the following points in mind:

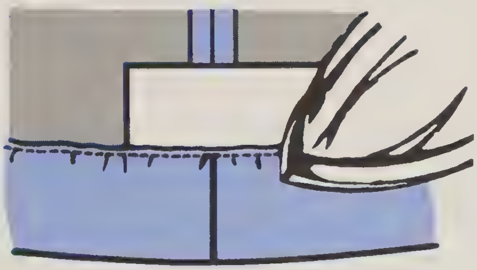
- For heavy or stiff fabrics and stable knits, use a method that will provide the least bulk. Do not use a method that turns under the edge of the hem.
- For fabrics that ravel, use a method that will encase the edge of the hem to prevent raveling.
- For stretch knits, use a method that will prevent the knit from raveling or curling.

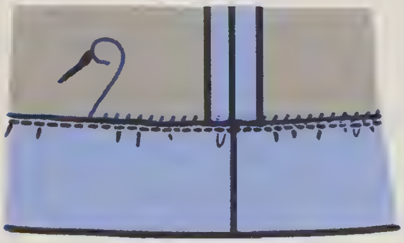
How to Make Hems



Turned-and-stitched hem. Use this hem on most light- to medium-weight fabrics. To make the hem, follow these steps:

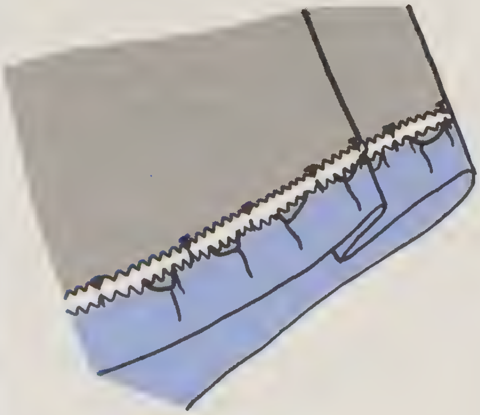
1. Turn under the top edge of the hem ¼ inch. Press in place.
2. Machine stitch close to the folded edge of the hem.
3. Turn the hem up and hand stitch to the garment. Use one of the hand stitches, such as the slip stitch, discussed in Lesson 22, "Hand Stitching."





Eased hem. This is used when a hem has excess fullness, such as on a circular skirt. To make the hem, follow these steps:

1. Using large stitches, machine stitch ¼ inch from the edge of the hem.
2. Pull on the top thread every few inches to distribute the fullness.
3. Turn the hem up. Press the eased portion of the hem using steam to shrink out some of the fullness. (Place paper between the hem and the garment as you press.)
4. Finish the raw hem edge by pinking, serging, applying hem tape, or turning and stitching.
5. Hand stitch the hem to the garment. Use one of the hand stitches discussed in Lesson 22, "Hand Stitching." The slip stitch is a good choice for a turned and stitched edge. The catch stitch is a good choice for a flat edge.



Taped hem using stretch lace. This hemming method is good for flared hems. The extra fabric created by the flare can be easily eased and stitched in place when the tape has been stretched and sewn to the hem. To make the hem, follow these steps:

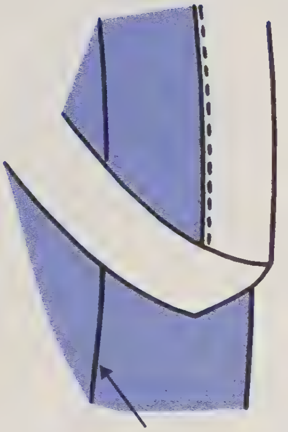
1. Fold the hem up to its finished position. Pin the stretch lace over the hem in the position it will be when the hem is finished. Do not stretch the lace. At this point, the hem will not lay flat against the garment. Only the lace will be the size of the finished hem.
2. Make sure the stretch lace overlaps the edge of the hem when you pin it in place.

(Continued)

You do not want to sew the tape too close to the edge of the hem or it will pull off easily.

3. Fold the hem down again and stitch the lace to the hem. Stretch the lace to fit the hem.

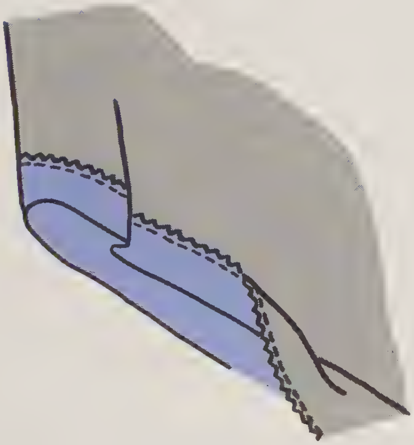
4. Turn the hem up into position again. Hand stitch the hem tape to the garment. Use one of the hand stitches, such as the hemming stitch or catch stitch, discussed in Lesson 22, "Hand Stitching."



Taped hem using nonstretch tape. This method may be used for hems that have no flare, fabrics that are medium to heavy in weight, and fabrics that ravel. To make the hem, follow these steps:

1. Stitch the nonstretch tape to the edge of the hem. Be sure the tape overlaps the hem at least half the width of the tape. The stitching should be located close to the edge of the tape. If the tape and stitching are positioned too close to the edge of the hem, the tape will pull off easily.

2. Turn the hem up and hand stitch in place. Use one of the hand stitches, such as the catch stitch or hemming stitch, discussed in Lesson 22, "Hand Stitching."

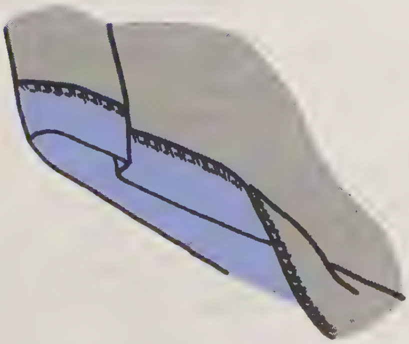


Stitched-and-pinked hem. This method is excellent for stable knits. Pinking the hem edge makes the hem less likely to show through to the outside of the garment. To make the hem, follow these steps:

1. Machine stitch ¼ inch from the edge of the hem.

2. Pink the edge of the hem close to the stitching line.

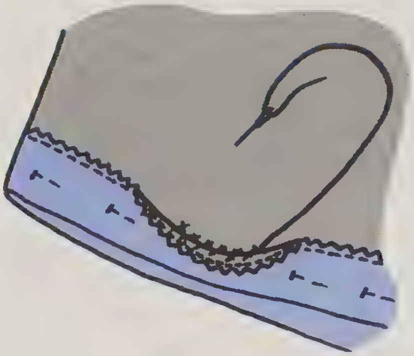
3. Turn the hem up and hand stitch to the garment. Use one of the hand stitches, such as the catch stitch, discussed in Lesson 22, "Hand Stitching."



Serged (pine-stitched or zigzagged) hem. Use on heavy or stiff fabrics. If the fabric ravels greatly, a taped hem is recommended over this method. This is also an optional method for stable knits. To make the hem, follow these steps:

1. Zigzag or serge (pine) stitch close to the edge of the hem.

(Continued)



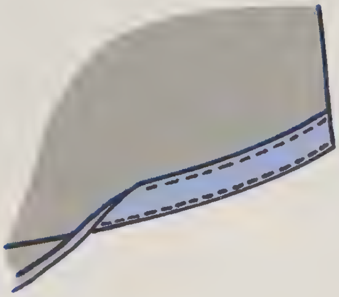
2. Turn the hem up and hand stitch to the garment. Use one of the hand stitches, such as the catch stitch, discussed in Lesson 22, "Hand Stitching."

Double-stitched hem. Use this method for knit fabrics when the pattern instructions call for a wider hem. To make the hem, follow these steps:

1. Prepare the edge of the hem as recommended for the fabric, possibly stitched and pinked.
2. Fold the hem up to its finished position. Roll back half the hem width. Using a catch stitch, stitch around the hem in this position.
3. Fold the hem up to its finished position and stitch around the hem again at the edge.
4. Press the finished hem.

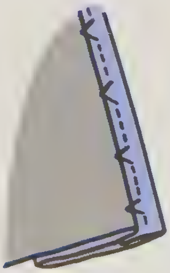
How to Make Machine Hems

Your decision to use a machine-stitched hem will depend on the design of the garment and the fabric you will be using. Machine hems are frequently used on knit fabrics. They are also common for jeans and some types of shirts. Your pattern may indicate whether this hem type is appropriate for your garment. The machine stitching will be seen on the outside of the garment, so consider whether this is a look you want for your hem.



Narrow machine hem. To make this hem, follow these steps:

1. Decide how wide you want the finished hem to be. Normally, machine hems are kept narrow in width. Add ¼ inch to the width of the finished hem.
2. Turn under the ¼ inch and press.
3. Machine stitch close to the edge that you have turned under. You may also wish to stitch close to the lower edge of the hem.



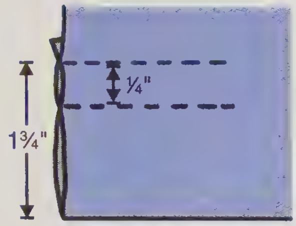
Machine-blind hem. To make this hem, follow these steps:

1. Press the raw edge under ½ inch. Then fold the hem to the desired width.

(Continued)

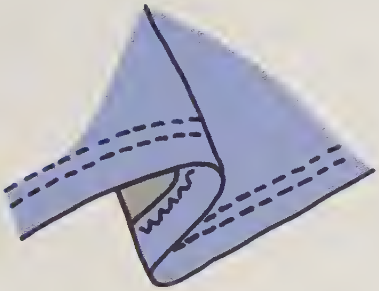
2. Turn garment back, exposing ¼ inch of the hem.
3. Adjust the machine for a blind hem stitch, machine stitching on the hem.
4. Turn the hem flat and press.

Machine hem for knits. To make this hem, follow these steps:



1. Trim the hem to 2 inches. Fold up and press.
2. Stitch through both layers 1¾ inch from the folded hem edge.
3. Stitch again through both layers ¼ inch below the first row of stitching.

Twin-needle hem. To make this hem, follow these steps:



1. Turn the hem up to the desired width. Press.
2. Stitch through both layers from the right side, using a twin-needle and two thread spools. Follow the seam guide. Trim excess hem allowance after stitching.

Name ______________________________

Date ________________ Period __________

Activity 23-1: Choosing a Hem

Complete the activity below by indicating under each fabric sample which hemming method would be the most appropriate for that fabric. Also, indicate your reason for the choice you made. (For instance, the fabric is heavy, fabric ravels, etc.)

Hemming Methods

hemming method ______________

criteria ____________________

hemming method ______________

criteria ____________________

hemming method ______________

criteria ____________________

hemming method ______________

criteria ____________________

Activity 23-2: Practicing Hemming

Supplies needed:

- scraps of woven fabric in various weights
- scraps of knit fabric
- stretch lace
- nonstretch hem tape
- needle
- pins
- shears
- thread

This activity will help you practice constructing a variety of hems. Your teacher will tell you which of the hemming methods you are to practice. For each hem you are to construct, begin by preparing a fabric swatch as directed in the chart below. Complete the hem as directed in the lesson.

Stitch to Be Completed	Swatch Preparation
Turned-and-stitched hem	Cut one 3- by 4-inch light- to medium-weight fabric swatch. Hem along a long edge.
Eased hem Taped hem using stretch lace	For each hem, prepare a 3- by 6-inch light- to medium-weight fabric swatch. Cut one 6-inch side on a curve. Hem along the curved edge.
Taped hem using nonstretch tape Serged (pine-stitched or zigzagged) hem	For each hem, cut a 3- by 4-inch heavyweight fabric swatch. Hem along a long edge.
Stitched-and-pinked hem Double-stitched hem Narrow machine hem Machine-blind hem Machine hem for knits Twin-needle hem	For each hem, cut a 3- by 4-inch knit fabric swatch. Hem along a long edge.

Activity 23-3: Evaluating Learning

The hem samples that you completed in Activity 23-2 will be evaluated below. They will be rated using the following scale: E—Excellent, G—Good, F—Fair, P—Poor. The appropriate letters will be placed in the spaces below. Also, compile a list of guidelines that would be helpful when selecting hemming methods for various types of fabrics.

	Turned-and-Stitched Hem	Eased Hem	Taped Hem Using Stretch Lace	Taped Hem Using Nonstretch Tape	Stitched-and-Pinked Hem	Serged (Pine-Stitched or Zigzagged) Hem	Double-Stitched Hem	Narrow Machine Hem	Machine Blind Hem	Machine Hem for Knits	Twin-Needle Hem
Hem looks attractive from the right side of the sample.											
Stitches are spaced evenly.											
Stitches are not too far apart or too close together.											
Raw edges of hem are finished appropriately.											
Sample looks very neat.											

Guidelines for the Selection of a Hemming Method

1. ______________________________

____

2. ______________________________

____

3. ______________________________

____

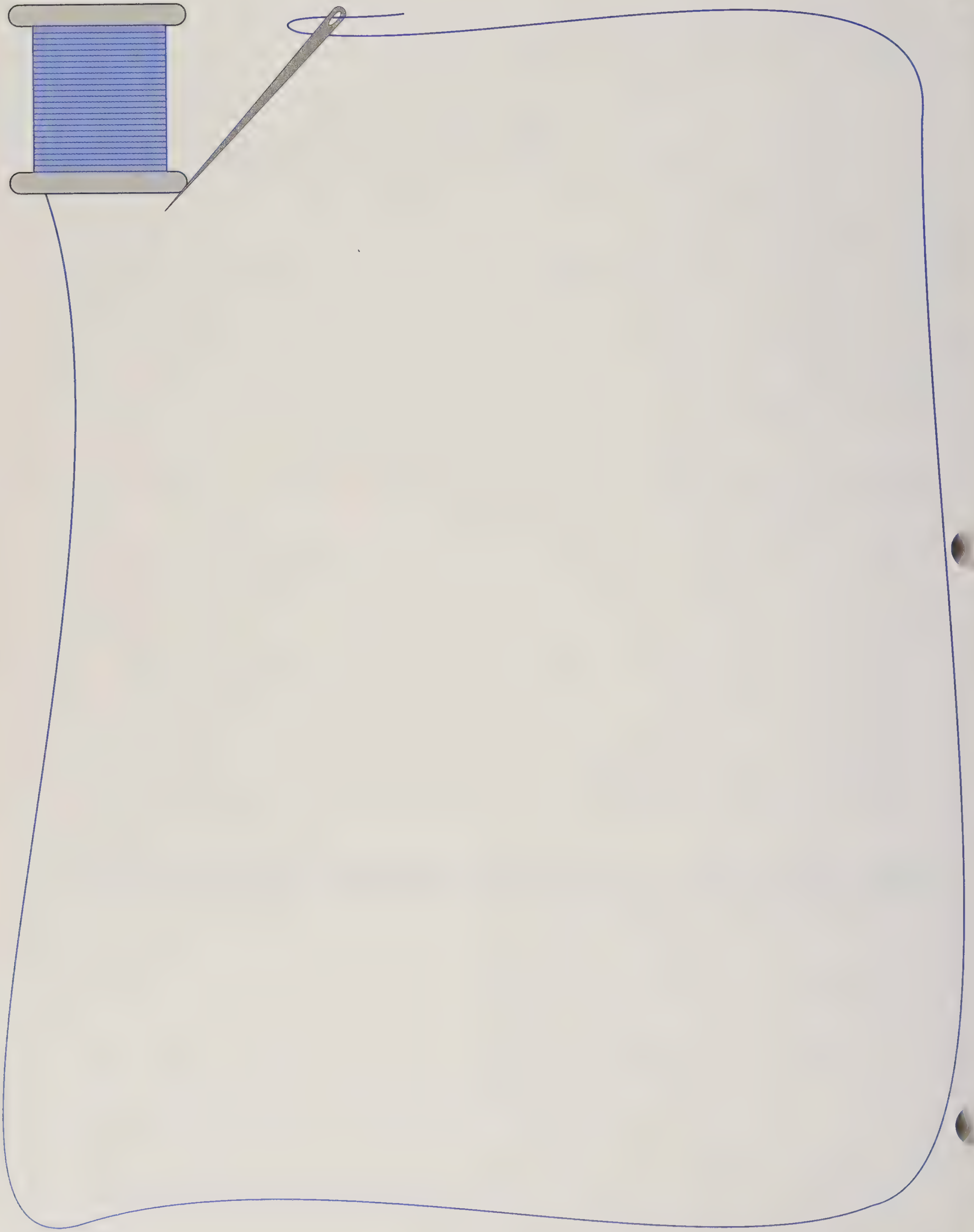
4. ______________________________

____

5. ______________________________

____

notes



Unit 4

Assessing Your Learning

24
23
16
18
19
8
7
3
2
1

Unit 4

Assessing Your Learning

This unit is designed to help you evaluate your learning before you begin your sewing project. It consists of two parts.

Basic Sewing Skills Post-Test

This test reviews the most important concepts covered in Unit 3. It also includes questions on sergers, which are covered in Unit 7. If you have not used sergers in your classroom, your teacher may ask you to skip these questions. Taking this test will help you assess your understanding of the information in the various lessons.

Post-Test Analysis

This form will help you and your teacher analyze the results of your post-test. You will be able to see areas in which you have gained sufficient knowledge. You will also be able to see areas you might want to review. You can use this information as you prepare to begin your sewing project.

Name ____________________

Post-Test Score __________ Date __________ Period __________

Basic Sewing Skills Post-Test

This post-test will help you identify areas of clothing construction in which you have gained knowledge and skill. It will also help you identify areas you may want to review before beginning your sewing project. The questions in Section A are a repeat of the pretest you took in Unit 2. Answering them will show you how much you have improved since taking the pretest. The questions in Section B relate to lessons over which you were not previously tested. Your teacher may tell you to skip some of these questions depending on which lessons you have completed.

Read each question carefully. Select the best answer and write the letter in the blank. When you have finished, your teacher will give you directions regarding how the test is to be corrected.

Section A

____ 1. When taking a back waist length measurement, the tape measure should be placed ______.
   A. from the top of the shoulder to the waist
   B. from the waist to the desired finished garment length
   C. from the prominent bone at the back of the neck to the waist

____ 2. When taking a man's sleeve length measurement, the measuring tape is placed from the ______.
   A. elbow to the wrist
   B. top of the spine to the wrist
   C. shoulder bone to the wrist

____ 3. You are making a shirt for a friend with the following measurements: bust 32, waist 26½, hips 36. Which pattern size would you select? (Refer to the chart below.)
   A. Size 10.
   B. Size 12.
   C. Size 14.

Size	10	12	14	16
Bust	32 ½	34	36	38
Waist	25	26 ½	28	30
Hips	34 ½	36	38	40

(Continued)

Name ______________________________

_____ 4. How much fabric would be required for View A in a size 12 if the fabric were 44/45" wide? (Refer to the chart below.)

A. 1⅞ yards.
B. 3⅛ yards.
C. 3¼ yards.

VIEW A	8	10	12	14
44/45" fabric	3	3⅛	3⅛	3¼
58/60" fabric	1½	1⅞	1⅞	2
VIEW B				
44/45" fabric	3¼	3¼	3¼	3½
58/60" fabric	2	2	2	2⅛

_____ 5. The yardage requirement table for various views, sizes, and widths of fabric is found on the ______.

A. back of the pattern envelope
B. front of the pattern envelope
C. guide sheet

_____ 6. Which of the following types of information would *not* be found on the pattern envelope?

A. A description of the garment.
B. Suggested fabric from which to construct the garment.
C. A list of pattern pieces needed for the garment view being constructed.

_____ 7. The lengthwise grain of the fabric ______.

A. runs from cut edge to cut edge
B. runs from selvage to selvage
C. forms a 45 degree angle with the selvage edge

_____ 8. The ends of woven fabric should be straightened by cutting along a pulled crosswise thread when the fabric has been ______.

A. cut from the bolt
B. torn from the bolt
C. either cut or torn from the bolt

_____ 9. To determine whether or not a piece of fabric is on grain, the fabric should first be folded ______.

A. crosswise
B. on the bias
C. lengthwise

_____ 10. How can you determine whether or not the ends of the fabric are straight with the grain?

A. Fold the fabric lengthwise to see if the raw, cut edges match.
B. See if one crosswise thread ravels from selvage to selvage without being stopped by other crosswise threads.
C. Pull on the true bias every few inches.

(Continued)

Name ________________________________

In questions 11 through 16, match the pattern symbols with the letter that represents the symbol on the diagram. Use Diagram A for questions 11 through 13. Use Diagram B for questions 14 through 16. (Diagrams are for single-size patterns.)

_____ 11. straight of grain

_____ 12. center front line

_____ 13. notch

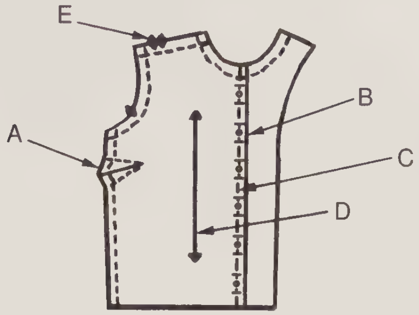


Diagram A

_____ 14. stitching line

_____ 15. place on fold

_____ 16. lengthening or shortening lines

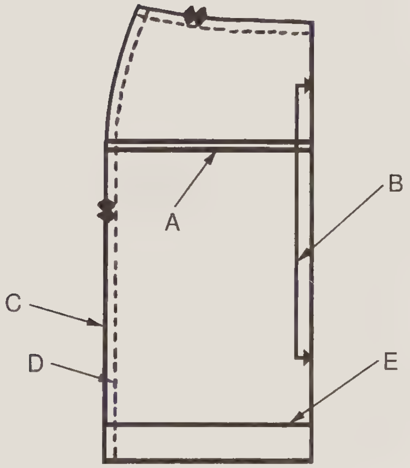


Diagram B

_____ 17. To see if a pattern piece is placed on the fabric straight with the grain, measure the distance from _____.
   A. both ends of the grainline arrow to the center front line
   B. both ends of the pattern piece to the selvage edge
   C. both ends of the grainline arrow to the selvage edge

_____ 18. When pinning the pattern to the fabric, pattern pieces should _____.
   A. all be placed on the fabric before pinning any of them in place
   B. be placed on the fabric and pinned one at a time
   C. be pinned and cut out one at a time

_____ 19. When cutting out a pattern piece, notches should be cut _____.
   A. in, toward the seam allowance
   B. straight across the notch
   C. out, away from the seam allowance

_____ 20. Which of the following is *not* a method for removing marks left by special fabric marking pens?
   A. Apply a cleaning compound made especially to remove the marks.
   B. Rub marks gently with a dampened cloth.
   C. Allow the marks to fade without doing anything.

(Continued)

Name ____________________________________

_____ 21. Which of the following statements is true about using tracing paper to mark pattern symbols?
A. The garment must be laundered to remove markings.
B. Always test tracing paper on a fabric swatch before using it to be sure marks can be removed.
C. Marking should always be done on the right side of the fabric.

_____ 22. The best method to use when transferring pattern symbols to a thick, fuzzy fabric would be ______.
A. tailor's tacks
B. pins and chalk
C. fabric marking pen

_____ 23. The rule to follow when threading the sewing machine needle is to thread the needle from ______.
A. the side of the last thread guide
B. right to left
C. left to right

_____ 24. When the bobbin thread lies along the lower surface of the fabric, which statement below would be correct?
A. The upper tension is too loose, so the tension regulator is turned to a smaller number.
B. The upper tension is too tight, so the tension regulator is turned to a smaller number.
C. The upper tension is too loose, so the tension regulator is turned to a larger number.

_____ 25. How should a sewing machine needle be placed in a machine?
A. Flat side of shank toward the front.
B. Flat side of shank to the right.
C. Flat side of shank toward the back.

_____ 26. The purpose of the sewing machine feed dog is to ______.
A. hold the thread in place
B. move the fabric along
C. control tightness of the thread and move the thread through the machine

_____ 27. The correct direction for pressing horizontal darts is ______.
A. up, toward the armhole
B. down, toward the hem
C. in either direction

_____ 28. The general rule for pressing is to press ______.
A. each piece immediately after stitching
B. when the garment is finished
C. after several steps have been completed

_____ 29. Which of the following garment areas should be pressed on the curved surface of a pressing ham?
A. The darts.
B. The hems.
C. The cuff seams.

(Continued)

Name ______________________________

_____ 30. Plain seams are usually pressed ______.
A. to one side
B. on a curved surface
C. open, using the point of the iron

_____ 31. In general, vertical darts should be pressed to the ______.
A. right
B. center of the garment
C. left

_____ 32. The purpose of staystitching is to prevent ______.
A. raveling while the garment is being made
B. facings from showing on the right side of the garment
C. stretching while the garment is being made

_____ 33. When should staystitching be done?
A. As the first stitching process on a garment piece.
B. Just before the final pressing.
C. At any point during the construction process.

_____ 34. The direction for staystitching should be ______.
A. from the narrow to the wide part of the garment piece
B. away from the center of the garment piece
C. with the grain of the fabric

_____ 35. Where should staystitching be done?
A. ¼ inch from the cut edge of a garment piece.
B. ½ inch from the cut edge of a garment piece.
C. On the seamline of a garment piece.

_____ 36. A plain seam is stitched with ______.
A. right sides of the garment pieces together
B. wrong sides of the garment pieces together
C. the right side of one garment piece against the wrong side of the other garment piece

_____ 37. How far from the cut edge are most plain seams stitched?
A. ⅜ inch.
B. ½ inch.
C. ⅝ inch.

_____ 38. If a very sturdy seam is desired, which of the following would be the best choice?
A. Flat-felled seam.
B. Plain seam.
C. Double-stitched seam.

_____ 39. To conceal the seam allowance on a sheer fabric, which of the following would be the best seam choice?
A. Plain seam.
B. French seam.
C. Flat-felled seam.

(Continued)

Name ______________________________

_____ 40. Which of the seam allowances in a shirt is *not* trimmed?
A. The facing seam allowance.
B. The side seam allowance.
C. The neckline seam allowance.

_____ 41. The purpose of trimming seam allowances is to _____.
A. relieve the strain on the seam allowance
B. eliminate bulk
C. allow the seam to spread and make a smooth curve

_____ 42. Seam allowances that need trimming should be trimmed to _____.
A. ¼ inch
B. 1⁄16 inch
C. ½ inch

_____ 43. The term *grading* means to _____.
A. clip through the various layers of the seam allowance
B. trim the seam allowance
C. trim each layer of the seam allowance to a different width

_____ 44. If the guide sheet tells you to clip a seam allowance, what should you do?
A. Cut into the seam allowance several times at right angles to the seamline.
B. Cut off part of the seam allowance parallel to the seamline.
C. Cut into the seam allowance at center front.

_____ 45. When using heavy fabric that ravels, which of the following seam finishes would work best?
A. Turned and stitched.
B. Stitched and pinked.
C. Zigzagged or serged.

_____ 46. Which of the following is *not* a reason for finishing seam edges?
A. To prevent the seam from raveling during laundering and wearing.
B. To give the interior of the garment a finished look.
C. To prevent the seam allowances from stretching.

_____ 47. When using very lightweight fabric that ravels, which of the following seam finishes would work best?
A. Stitched and pinked.
B. Turned and stitched.
C. Pinked.

_____ 48. The selection of a seam finishing method to be used on a garment depends mostly on _____.
A. the fabric weight
B. the garment design
C. the care requirements of the finished garment

_____ 49. To clean finish the raw edge of a garment piece, you would turn the edge under ____.
A. ⅛ inch
B. ½ inch
C. ¼ inch

(Continued)

Name ______________________________

____ 50. The purpose of clean finishing the raw edge of a garment piece is to ____.
A. maintain the grainline
B. prevent raveling
C. prevent stretching

____ 51. Which of the following garment pieces should be clean finished?
A. Sleeve placket.
B. Neckline seam.
C. Facing.

____ 52. The purpose of understitching is to ____.
A. keep the facing turned to the underside
B. form a line on which to turn under the hem
C. keep the outside edge of the facing from raveling

____ 53. To understitch, you would ____.
A. stitch through the facing, seam allowance, and the outer layer of the garment
B. stitch ¼ inch from the raw edge of the facing, turn under, press, and stitch again close to the folded edge
C. stitch the facing to the seam allowance close to the seamline

____ 54. Which of the following garment areas might be understitched?
A. Collar.
B. Waistline seam.
C. Placket opening.

____ 55. Gathering requires the use of ____.
A. one row of stitching
B. two rows of stitching
C. three rows of stitching

____ 56. When the instruction sheet tells you to ease the shoulder seam, this means to ____.
A. sew two lines of long stitches on the shoulder seam allowance
B. match notches and work in the extra fabric
C. match the garment pieces at the neckline and trim off the extra at the shoulder

____ 57. The size of stitches used for gathering as compared to those used for seams should be ____.
A. longer
B. shorter
C. the same size

____ 58. In which of the following areas of a garment is there *no* ease?
A. Waist seam.
B. Underarm portion of armhole seam.
C. Placket opening.

(Continued)

Name ______________________________

Section B

_____ 59. Which of the following statements is true?
A. The only way to accurately determine the fiber content of a fabric is to read the label on the bolt end.
B. The fiber content, in most cases, can be determined by feeling and looking at the fabric.
C. The salesclerk will know the fiber content of the fabric.

_____ 60. Which of the following characteristics is unique to natural fibers?
A. Dry quickly.
B. Build up static electricity.
C. Absorb moisture and are comfortable to wear.

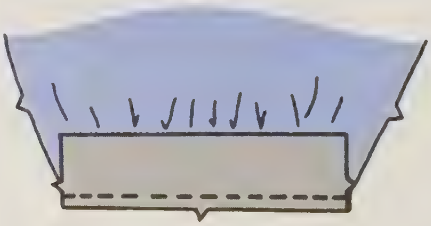
_____ 61. Which of the following characteristics is unique to manufactured fibers?
A. Tend to shrink.
B. Are heat sensitive.
C. Absorb moisture and are comfortable to wear.

_____ 62. When selecting a fabric for a summer shirt, which of the following fibers would be the best choice?
A. Acrylic and nylon blend.
B. Cotton and polyester blend.
C. 100 percent polyester.

_____ 63. Which of the following characteristics would you expect from a fiber blend of 65 percent cotton and 35 percent rayon?
A. Nonabsorbent.
B. Shrinkage.
C. Static electricity build up.

_____ 64. Which of the following can be found on a pattern instruction sheet?
A. Layout directions for each pattern view.
B. Yardage requirements for each pattern view.
C. Fabric recommendations for the garment.

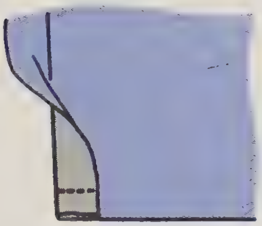
_____ 65. Select the statement that best describes the diagram.
A. Pin wrong side of sleeveband to right side of sleeve, matching notches. Adjust gathers to fit. Stitch.
B. Pin sleeveband to sleeve with right sides together, matching notches and side edges. Adjust gathers to fit. Baste. Stitch.
C. Pin sleeveband to sleeve with right sides together, matching bottom edges and all notches. Baste along unnotched edge. Stitch.

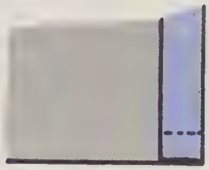


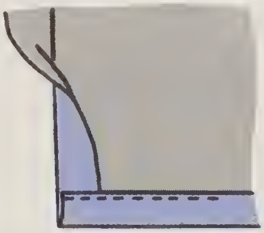
(Continued)

Name ____________________________________

_____ 66. Select the diagram that illustrates the following instructions: Turn lower edge of front facing to outside on foldline. Stitch 1¼ inch from lower edge.


a


b


c

_____ 67. To find directions for sewing your garment together, read the instruction sheet starting at ______.
A. the beginning of the written instructions
B. any point that describes a garment detail for your view
C. the beginning of the written instructions for your view

_____ 68. The term *ease* refers to the amount of ______.
A. extra fabric allowed in a garment to make it comfortable to wear
B. fullness added to achieve a specific garment design
C. extra fabric allowed to fit individuals with figure problems

_____ 69. The amount of ease usually allowed in a waistline seam is ______.
A. 2 inches
B. 1 inch
C. ½ inch

_____ 70. To help you decide how a pattern design is going to fit, read the information given on the ______.
A. instruction sheet that explains how to alter the pattern
B. envelope back that charts the body measurements
C. envelope back that describes the garment features

_____ 71. When increasing a pant waist seam by 1 inch, how much must the back pattern piece be increased at the side seam?
A. 1 inch.
B. ¼ inch.
C. ½ inch.

_____ 72. To prevent hand sewing thread from tangling, pull the thread over ______.
A. an emery bag
B. beeswax
C. a glue stick

_____ 73. Which of the following items would be considered a notion?
A. Pins.
B. Seam ripper.
C. Zipper.

(Continued)

Name ______________________________

_____ 74. Ballpoint sewing machine needles are used to sew on ______.
A. knit fabrics
B. dense fabrics such as denim
C. sheer fabrics

_____ 75. Liquid seam finish may be used by applying it to ______.
A. a cut accidentally made on the outside of a garment
B. the whole length of a seam edge
C. the points of a collar

_____ 76. The main reason interfacing is used in a garment is to ______.
A. finish the raw edges of facing pieces
B. provide body and shape to the garment
C. provide a finished look to the inside of the garment

_____ 77. For best results, select interfacing that is ______.
A. slightly heavier than the fashion fabric
B. slightly lighter than the fashion fabric
C. the same weight as the fashion fabric

_____ 78. Fusible interfacing may bubble on some fabrics when ______.
A. too much steam is used to apply the interfacing
B. the interfacing is too heavy for the fashion fabric
C. the iron is set at too high a temperature

_____ 79. Which of the following garment areas should usually be interfaced?
A. Zipper fly.
B. Skirt back.
C. Collar.

_____ 80. Which of the following is an example of topstitching?
A. Turning under ¼ inch on the facing edge and stitching on the right side of the facing close to the edge.
B. Stitching on the right side of the facing through the facing and seam allowance.
C. Stitching around the edge on the right side of the collar.

_____ 81. To topstitch a waistband following the guidelines for directional stitching, you would stitch ______.
A. from one end of the waistband all the way around
B. each side of the waistband from the same direction
C. each side of the waistband from opposite directions

_____ 82. The purpose of topstitching is to ______.
A. improve the appearance of the garment
B. prevent the seams from rolling to the right side of the garment
C. prevent the garment edges from stretching when it is worn

_____ 83. Topstitching would most likely add to the appearance of a ______.
A. sheer blouse
B. satin evening dress
C. jacket

(Continued)

Name ______________________________

_____ 84. A basting stitch would be used to ______.
A. temporarily stitch a hand worked buttonhole
B. permanently hand stitch a seam together
C. temporarily hold layers of fabric together

_____ 85. To hand stitch a hem edge that has not been turned under, use a(n) ______.
A. catch stitch
B. overcast stitch
C. slip stitch

_____ 86. To hand stitch a hem edge that has been turned under, use a(n) ______.
A. catch stitch
B. overcast stitch
C. slip stitch

_____ 87. When hand stitching a pocket to the garment front, the best hand stitch to use would be a ______.
A. rolled-hem stitch
B. catch stitch
C. slip stitch

_____ 88. Selection of a hemming method depends most on the ______.
A. texture of the fabric
B. weight of the fabric and its tendency to ravel
C. design of the garment being hemmed

_____ 89. A taped hem would be best used on a garment made from ______.
A. stretch knit fabric
B. fabric that ravels
C. sheer fabric

_____ 90. When making a shirttail hem, the best hem to use would be a ______.
A. narrow machine hem
B. machine-blind hem
C. taped hem

_____ 91. One function of the stitch finger on a serger is to ______.
A. determine the length of the stitch formed
B. regulate the tension on the thread as the stitch is formed
C. determine the width of the stitch formed

_____ 92. A serger is generally threaded from ______.
A. right to left, the needle being threaded last
B. left to right, the upper looper being threaded last
C. left to right, the lower looper being threaded last

_____ 93. Which of the following statements is true about a 3-thread overlock stitch?
A. One needle and two loopers are used to form the stitch.
B. A chain stitch is formed by the needle and lower looper.
C. The stitch is not strong enough to sew seams.

(Continued)

Name ______________________________

_____ 94. When the tension is balanced on a serge stitch, the ______.
- A. looper threads will interlock at the edge of the fabric and the needle thread will be smooth
- B. needle thread and the upper looper thread will interlock at the stitching line
- C. looper threads will interlock at the stitching line and the needle thread will be smooth

_____ 95. Which of the following is *not* a method for securing serged seam ends?
- A. Backstitching over the ends of the seam.
- B. Knotting the threads and securing them with seam sealant.
- C. Thread the excess chain through a large-eyed needle and run it back under six to eight stitches.

_____ 96. When the serger is not stitching correctly, the first thing to do is ______.
- A. clean the lint from the knives and oil the machine
- B. check to see if the machine is properly threaded
- C. replace the needle

_____ 97. When choosing a pattern to construct on the serger, select: ______.
- A. a pattern having few seams and details
- B. a loose, unfitted garment, or a garment where fit is achieved through the stretch of the fabric
- C. any pattern, as most are suitable for serging

_____ 98. The term *flat construction* refers to a method of construction where ______.
- A. edges are serged on flat items, such as tablecloths, napkins, and scarves
- B. pockets, plackets, and other details are completed before side seams are sewn and sleeves are finally set in
- C. necklines, armseyes, sleeves, and hems are finished before underarm and side seams are sewn

_____ 99. When pin basting garment pieces to be serged, place pins ______.
- A. horizontally on the seamline
- B. parallel and to the right of the seamline
- C. parallel and to the left of the seamline

_____ 100. When serging a tuck-in shirt hem, the best stitch to use is a ______.
- A. finished-edge hem
- B. blind hem
- C. narrow rolled hem

_____ 101. When constructing a lettuce-leaf hem on a serger, the ruffling effect may be increased by ______.
- A. using stretchy fabric, shortening the stitch length, and gently pushing the fabric under the presser foot
- B. using stretchy fabric, shortening the stitch length, and gently stretching the fabric as it is stitched
- C. lengthening the stitch length and reducing pressure on the presser foot

Name ______________________________

Date ________________ Period __________

Post-Test Analysis

Complete the chart below by referring to your corrected post-test. Circle the numbers in the first column of the chart that correspond with the test questions you answered correctly. The numbers in the second column tell how many questions should be answered correctly to demonstrate thorough understanding of the material in each lesson. If you have missed more than the specified number of questions for any lesson, place a check in the third column. This will indicate that you might want to review the lesson before beginning your sewing project.

Compare Section A of the chart with Section A on the Student Program Plan Sheet you completed in Unit 2. Notice areas in which you have improved. Also notice your areas of success in Section B. Use this analysis as you work with your teacher to select and plan your sewing project.

Section A			
Questions Answered Correctly (Circle)	**Correct Number Needed**	**Lessons to Be Completed (✓)**	**Lessons**
1 2 3	3		1–Taking Measurements & Selecting Size
4 5 6	3		2–The Pattern Envelope
7 8 9 10	3		4–Fabric Preparation
11 12 13 14 15 16	5		6–Pattern Symbols
17 18 19	3		8–Pattern Layout, Pinning, & Cutting
20 21 22	3		9–Transferring Pattern Symbols
23 24 25 26	4		11–Operating the Sewing Machine
27 28 29 30 31	4		12–Pressing As You Sew
32 33 34 35	3		13–Staystitching
36 37 38 39	4		14–Seams
40 41 42 43 44	4		15–Clipping, Notching, Trimming, & Grading
45 46 47 48	4		16–Seam Finishes
49 50 51	3		17–Clean Finishing
52 53 54	3		18–Understitching
55 56 57 58	3		19–Easing & Gathering

(Continued)

Name ________________________________

Section B			
Questions Answered Correctly (Circle)	Correct Number Needed	Lessons to Be Completed (✓)	Lessons
59 60 61 62 63	4		3–Making Fabric Choices
64 65 66 67	3		5–Reading the Instruction Sheet
68 69 70 71	4		7–Pattern Adjustments
72 73 74 75	4		10–Small Equipment & Notions
76 77 78 79	3		20–Interfacing
80 81 82 83	3		21–Topstitching
84 85 86 87	3		22–Handstitching
88 89 90	3		23–Hemming Methods
91 92 93 94 95 96	5		44–Operating the Serger Machine
97 98 99 100 101	5		45–Serger Construction Techniques

Unit 5

Project Selection and Planning

Unit 5

Project Selection and Planning

This unit is designed to assist you in selecting and planning your sewing project. It is composed of worksheets that will help you choose a project suited to your skill level. Additional worksheets will help you analyze the cost and care requirements of your materials. A final set of worksheets lists steps you will need to follow in order to complete your sewing project. As you fill in these worksheets, you will be referring to lessons from Unit 3 and planning which lessons to complete in Unit 6.

Name ______________________________

Date ____________________ Period ____________

Skill Checklist

Below are four lists of sewing skills grouped by level of difficulty. Using the rating scale below, place the number in each box that indicates how well you perform that specific skill. Then total your score for each skill group in the space provided.

0 — I never attempted the skill before.
1 — I attempted the skill but did not do very well.
2 — I perform the skill moderately well.
3 — I perform the skill exceptionally well.

Skill Group A

☐ 1. darts
☐ 2. tucks
☐ 3. plain seam
☐ 4. zigzagged seam finish
☐ 5. machine-worked buttonholes
☐ 6. hooks and eyes or snaps
☐ 7. patch pockets
☐ 8. neck or armhole facing
☐ 9. machine-stitched hem
☐ 10. elastic casing
☐ Total score for Skill Group A

Skill Group B

☐ 1. hand-sewn hem
☐ 2. flat-felled seam
☐ 3. pleats
☐ 4. interfaced waistband
☐ 5. waistline facing
☐ 6. in-seam pocket
☐ 7. centered zipper
☐ 8. lapped zipper
☐ 9. fly front zipper
☐ Total score for Skill Group B

Skill Group C

☐ 1. interfaced front bodice facing
☐ 2. invisible zipper
☐ 3. waistline seam stay
☐ 4. flat collar
☐ 5. rolled collar
☐ 6. set-in sleeves
☐ 7. raglan sleeves
☐ 8. sleeve placket
☐ 9. interfaced cuffs
☐ 10. rolled cuffs
☐ 11. interfaced collar band
☐ 12. front opening placket
☐ 13. bound seam
☐ Total score for Skill Group C

Skill Group D

☐ 1. bound buttonholes
☐ 2. lining or underlining
☐ 3. shoulder pads
☐ 4. interfaced lapels
☐ 5. welt pockets
☐ 6. French seam
☐ 7. bound hem
☐ 8. rolled hem
☐ Total score for Skill Group D

Name ______________________________

Date ________________ Period __________

Project Selection Worksheet

The type of project you choose should be related to your skill level. Refer to your total scores for each skill group on the "Skill Checklist." Then use the chart below to determine the group from which you should select your sewing project. If you plan to complete more than one sewing project, select future projects from a more advanced group. Record your project choice in the space provided.

Project Selection Chart

To Select Your Project from Group	Your Score for These Skill Groups Should Be		
	A	B	C
A	Less than 20	—	—
B	More than 20	Less than 18	—
C	More than 20	More than 18	Less than 26
D	More than 20	More than 18	More than 26

Group A	Group C
Jumper Wraparound skirt Jumpsuit without sleeves or a collar Shirt without a collar or set-in sleeves Pants or a skirt with an elastic casing at the waist	Shirt with a collar and/or sleeves Dress with a collar and/or sleeves Jumpsuit with a collar and/or sleeves
Group B	**Group D**
Pants with a waistband and a zipper Jeans Skirt with a waistband and a zipper	Blazer Jacket Coat Detailed dress

Project you have selected: ______________________________

Name ______________________________

Date ________________ Period __________

Pattern Selection Worksheet

You should consider your skill level when choosing a pattern. Try to select a challenging pattern that you can complete successfully. A pattern's level of difficulty is based partly on the number of pattern pieces required to make a garment. Patterns with a lot of pieces tend to be more difficult to construct than those with only a few pieces. The design of a pattern also affects its level of difficulty. For instance, a pattern with set-in sleeves would be more difficult than a pattern with armhole facings.

Remember that pattern companies have different classifications for different levels of difficulty. Use the information found in pattern catalogs to help you determine the pattern classification that is right for you. Then choose a pattern from this classification for the type of garment you selected on the previous page.

Fill in information about the pattern you choose in the box below. Then complete the statements that follow.

Pattern company:

____

Pattern classification:

____

Pattern number:

____

Sketch a picture of your pattern in the space provided at the right. You may want to trace the picture on the pattern envelope. Your teacher will need this sketch for reference.

Complete the following statements.

1. My pattern is appropriate for my skill level because

____

____

2. My pattern design is appropriate for my body structure because

____

____

Name ______________________________

Date ________________ Period __________

Fabric Selection Worksheet

The type of fabric you choose can add to the difficulty of your project. It can also affect the way your garment will look. Read the list of suggested fabrics on your pattern envelope. Then use this worksheet to help you choose one of those fabrics that is appropriate for your skill level. Record your fabric choice in the space provided and then answer the questions that follow.

Refer to your "Project Selection Worksheet."

If you selected your project from Group A on the "Project Selection Worksheet," then select your fabric from Group 1 on this page.

Group 1

Tightly-woven, medium-weight fabrics
Stable knits

If you selected your project from Group B, then select your fabric from Group 1 or 2 on this page.

Group 2

Light-, medium-, or heavyweight fabrics
Plaids, checks, or stripes
One-way designs
Napped fabrics, such as corduroy

If you selected your project from Group C, then select your fabric from Group 1, 2, or 3 on this page.

Group 3

Stretch knits
Loosely-woven fabrics

If you selected your project from Group D, you may select your fabric from any group on this page. You may wish to select a fabric you have not used before as this will increase your learning.

Group 4

Slippery fabrics, such as crepe de chine or satin
Bulky fabrics
Sheer or lace fabrics
Pile fabrics, such as velvet or velveteen
Vinyls
Synthetic leathers, suedes, or furs

Your fabric selection: ______________________________

(Continued)

Name ______________________________

Complete the following statements.

1. My fabric and pattern will look good together because

____

____

2. My fabric is appropriate for my body structure because

____

____

3. My fabric is appropriate for my skill level because

____

____

Name ______________________________

Date ____________________ Period ____________

Project Cost Worksheet

Fill in the chart and then answer the questions below.

Cost of Project

Total yardage ________		
Price per yard $	$ ________	
Cost of fashion fabric		$ ________
Cost of lining		________
Cost of interfacing		________
Cost of notions		
Zipper	$ ________	
Thread	________	
Pattern	________	
Trim	________	
Buttons	________	
Other ________________	________	
________________	________	
________________	________	
Total cost of notions		________
Total cost of project		$ ________

1. Complete the following statements.

A. I was willing to spend the amount shown for my materials because

____

____

B. I think making this project will be a worthwhile use of my time because

____

____

2. Compare the cost and time involved in making your project with the cost and time involved in purchasing a comparable item.

____

____

Name ________________________________
Date ____________________ Period ____________

Planning Your Project

Fill in the information required and attach swatches in the chart below. Then complete the exercises that follow. If necessary, refer to the lessons indicated.

Fiber Content	Care Instructions	Sample Swatch
Fashion fabric:	Cleaning:	
	Pressing:	
Interfacing:	Cleaning:	
	Pressing:	
Linings and underlinings:	Cleaning:	
	Pressing:	
Trims:	Cleaning:	
	Pressing:	

1. Explain whether all the fabrics and trims you are using will be compatible in terms of care. (Refer to Lesson 3, "Making Fabric Choices.")

2. List any special finishes that have been applied to your fabric(s).

3. Considering the fiber content and special finishes, list the steps you will take to prepare your fabric(s) for construction. (Refer to Lesson 3, "Making Fabric Choices.")

4. Check all the boxes that apply to your fashion fabric. Use your responses to help you answer the questions that follow.

☐ lightweight
☐ medium weight
☐ heavyweight
☐ sheer
☐ bulky
☐ tightly woven
☐ loosely woven
☐ stable knit
☐ stretch knit
☐ ravels
☐ plaid
☐ stripe
☐ one-way design
☐ nap

(Continued)

Name ______________________________

5. Explain how you will fold your fabric and what techniques you will use when laying out your pattern pieces. (Refer to Lesson 8, "Pattern Layout, Pinning, and Cutting.")

6. Identify the method you will use to mark pattern symbols on your fabric and explain your choice. (Refer to Lesson 9, "Transferring Pattern Symbols to the Fabric.")

7. Check the pressing problems you may encounter with your fashion fabric. You may need to test a swatch of your fabric.

   ☐ heat sensitivity
   ☐ shine from iron
   ☐ other ____________________
   ☐ crushed nap
   ☐ iron marks
   ☐ fusible inferfacing not compatible (Do a test swatch.)

   Explain how you will avoid the problems you checked. (Refer to Lesson 12, "Pressing As You Sew.")

8. Identify the type of seam you will use on your fabric and explain your choice. (Refer to Lesson 14, "Seams.")

9. Identify the type of seam finish you will use on your fabric and explain your choice. (Refer to Lesson 16, "Seam Finishes.")

10. Identify the type of interfacing you have chosen to use with your fashion fabric and explain your choice. (Refer to Lesson 20, "Interfacing.")

11. Identify the hemming method you will use on your fabric and explain your choice. (Refer to Lesson 23, "Hemming Methods.")

Name ____________________________________

Date ______________________ Period ____________

Beginning Your Project

Read the following outline. In the last column, list the lessons that will help you complete each step.

Use this outline as a reference as you work on your project. Following the steps in order will help you construct your project with a minimum of difficulty. Be sure to complete each step before proceeding to the next step. Refer to the lessons you listed in the right-hand column as needed.

Step	Description	Lesson Reference
1	Prepare your fabric according to the decisions you made on your plan sheet. Straightening the grain and preshrinking the fabric may be steps you will need to complete.	
2	Select the pattern pieces for the view of the pattern you are planning to make. Return all pieces you will not be using to the pattern envelope. Write your name on the instruction sheet, the envelope, and all pattern pieces.	
3	Prepare your pattern for layout and cutting by making any necessary alterations.	
4	Select and circle the layout diagram you will be using. Keep in mind your pattern size and fabric width. Remember to use a "with nap" layout when appropriate. Lay out your pattern pieces according to the diagram you circled. Be sure to measure for grainline accuracy. Watch for foldlines and bias-cut pieces. Match all plaids and stripes.	
5	Have your teacher check your layout before you begin to cut out the pattern pieces.	
6	Cut out the pattern pieces. Remember to keep fabric flat on the table while cutting. Cut with regular shears. Cut notches out away from seam allowances. Cut in the direction indicated on the pattern. Clean up scraps as you cut. Keep larger scraps until you have finished your project. Your teacher may have a scrap box for storing scraps you do not want.	
7	Mark pattern symbols according to the decision you made on your plan sheet. Remember, do not use pencil or pen to mark as it may not wash out.	
8	Staystitch curved areas, such as necklines and waistlines. Be careful not to stretch your fabric.	
9	When using the sewing machine, always begin by looking at the dial settings. Check the tension by stitching on a fabric scrap. Adjust tension and settings if necessary.	
10	Read your direction sheet carefully to determine how you should proceed. Pattern construction steps will vary depending on the design of the garment. Remember to press as you sew.	

(Continued)

Name ______________________________

Step	Description	Lesson Reference
11	Select the specific lessons for the construction details you will be completing on your project. Read through the lessons you need. Each lesson contains a statement of the objective, previously acquired skills, helps for success, and evaluation criteria. Read over the evaluation sheet before you begin constructing the detail. This will give you an idea of your construction goals. After you have completed the detail on your garment, fill out the evaluation form and take it to your teacher. Your teacher may also want to evaluate each step of your project.	
12	Turn in your garment. Be sure you have clipped threads and pressed the garment. Complete the final evaluation form. Turn it in with your project. Your teacher will also evaluate your project.	

Unit 6

Constructing the Project

16
18
19
23
24

Unit 6

Constructing the Project

This unit consists of lessons you will need to study in order to construct your sewing project. You will need to be concerned only with those lessons that apply to your sewing project. You will not be using all of the lessons. Other students in your class may be using lessons different from the ones that you will be using. Read through each lesson before you begin constructing the detail discussed. If you do this, you will know what you must do to be successful and how to go about constructing each detail of your garment. The lessons include three sections.

The Objective and Previous Learnings Required

This part of the lesson will tell you what you are to learn. It will also tell you the previous learnings you will be applying. If you have any difficulties as you are constructing your project or feel you need to review the skills listed, return to the proper lesson in this textbook.

Helps for Successful Construction of Each Detail

For each garment detail, helps are given for construction. Study each help sheet carefully. Try to find information that may not be found on the pattern instruction sheet or that you do not already know. Always read your pattern instruction sheet and the help sheets before asking your teacher for assistance. You need to be informed before you talk with the teacher. However, ask for help when you need it.

An Evaluation Criteria Sheet

Be sure to read the last page of each lesson before you begin constructing the garment detail. This will help you identify the criteria for which you need to strive.

When you have finished constructing each garment detail, complete the evaluation sheet according to your teacher's directions. Be prepared to take a few minutes to show your teacher what you have done and to discuss the evaluation with your teacher.

# Lesson 24

Constructing Darts, Tucks, and Pleats

Objectives

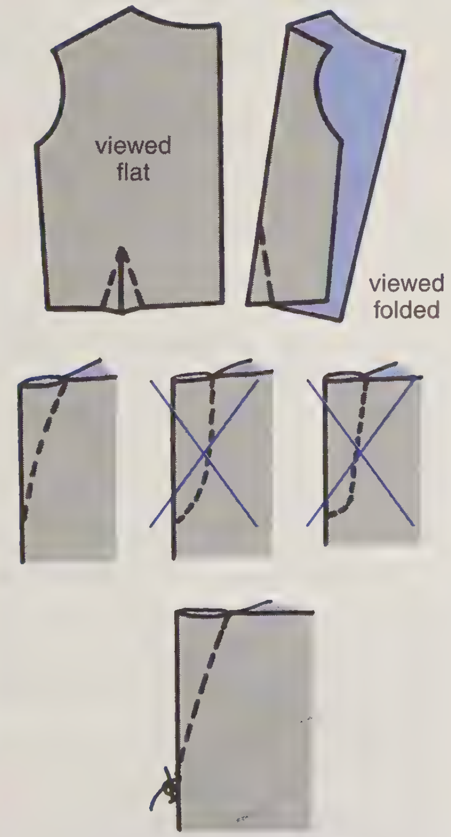
This lesson will help you construct darts, tucks, and pleats. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew

Helps for Success

Darts, tucks, and pleats help give a garment the shape you want. They are generally constructed before garment seams are sewn. As you construct a dart, tuck, or pleat, these guidelines may be helpful.

Constructing a Dart



The purpose of a dart is to shape flat fabric to fit curves of the body. To make good-fitting garments with darts, follow these steps:

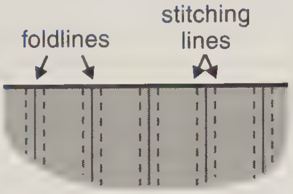
1. Mark dart lines accurately.
2. Fold the dart (right sides together) along the solid center line and match the two outer broken lines. You may want to push a pin through both layers of fabric on the lines to match them exactly. Pin the dart for sewing.
3. Stitch along the broken lines. When stitching the dart, correct shaping is important for perfect fit. Strive for a dart stitching line that will curve slightly away from the body and have a finely tapered point.

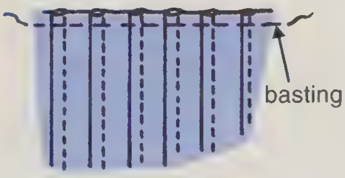
   Begin stitching at the wide end of the dart. Be sure to backstitch. However, for the smoothest dart tip, do not backstitch at that end. Rather, hand tie a knot at the tapered point of the dart.
4. Press the finished dart toward center lines of the garment or downward, whichever is appropriate. Press the dart over a tailor's ham to maintain contour in the garment piece.
5. Check the dart for fit.

Constructing Tucks

Tucks are folds that are stitched into fabric. They are used to provide fullness and/or a decorative effect in desired areas of a garment. Tucks may appear on the inside or outside of your garment, depending on the design.

On your pattern, tucks may be marked by solid foldlines and broken stitching lines. To make tucks, mark both types of lines on your fabric. Crease the tuck along the foldline, bringing the stitching lines together. Pin securely, stitch along the length of the tuck, and press. Be sure the tucks are consistent in size and are pressed in the correct direction. Baste across the ends of tucks ½ inch from the edge of the garment in the seam allowance. This will hold tucks in place as you join garment pieces.





Constructing Pin Tucks

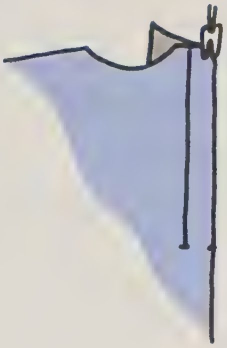
Pin tucks are narrow tucks used to create a decorative effect. On your pattern, pin tucks may be marked by a series of solid foldlines. Because pin tucks are so narrow, stitching lines do not usually appear on the pattern.

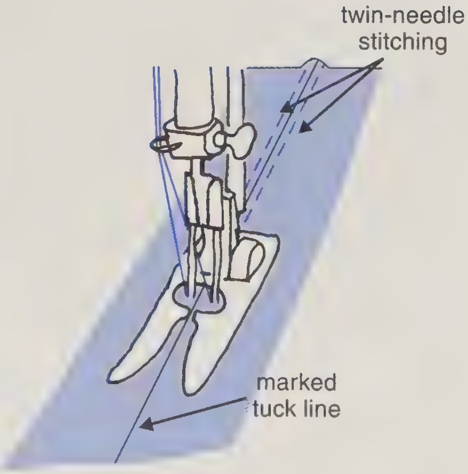
To construct pin tucks, begin by marking the location of the pin tucks on your fabric. Then stitch using one of the methods described below. When stitching pin tucks, always stitch in the same direction to avoid distorting the fabric.

Method 1. Fold the fabric along a marked line. Machine stitch ⅛ inch from the fold. Repeat with remaining pin tucks.

Method 2. Fold the fabric along a marked line. Using a serger and decorative thread, stitch close to the fabric edge. Be careful not to cut the fabric with the serger knives. Repeat with remaining pin tucks.

Method 3. Do not fold the fabric. Using a twin needle and, if desired, a pin tucking foot; stitch along the marked lines. Increase the upper tension slightly to make the tucks more pronounced. You may also place cording under the fabric and catch it in the stitching to make the tucks more pronounced.





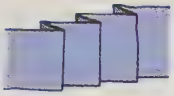
Constructing Pleats

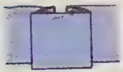
Pleats are soft or crisp folds of fabric that provide fullness in desired areas of a garment. They are generally wider than tucks.

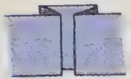
Classic knife pleats can be constructed in a series all lying in the same direction. Box pleats are two pleats that are folded in opposite directions. Inverted pleats are two pleats folded to meet each other.

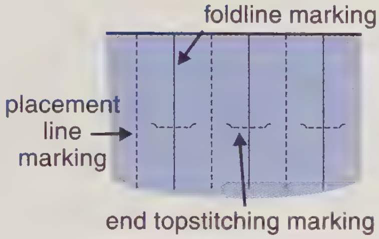
Pleats are not difficult to construct. The most important thing to remember is to mark and fold accurately. Begin by transferring pattern markings to your fabric. Mark both the foldlines and placement lines. Try using a different color of thread or removable marking pen for each type of line you are marking. Also, if you intend to topstitch the pleat, mark the stopping point for topstitching.

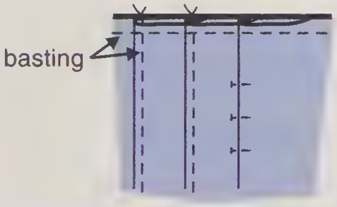
To shape pleats, lay the garment piece right side up on a flat surface. Fold each pleat along the foldline and bring it to the placement line. Carefully pin the pleat in place. Repeat with all pleats. Baste across the top of the pleats ½ inch from the garment edge in the seam allowance. Also baste along the length of the pleats ¼ inch from the edge. Remove pins.


knife pleats


box pleat


inverted pleat



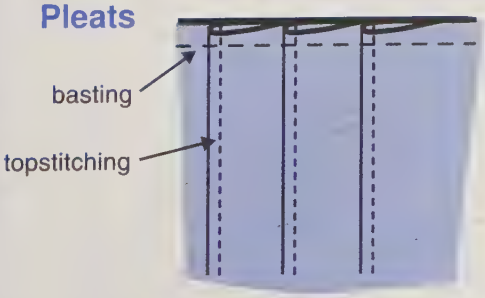


Pressing Pleats

Depending on the look desired, pleats may be pressed or left unpressed. For a soft, draped look, leave pleats unpressed. However, apply steam without touching the iron to the fabric to help pleats hang smoothly. For a crisp, tailored look, press the entire length of the pleats. Press pleats on both sides of the fabric. Place brown paper strips between pleats and use a press cloth. This will keep pleats from forming ridges on the right side of the garment.

Topstitching and Edge Stitching Pleats

Pleats may be topstitched and/or edge stitched to give them a crisp, tailored appearance. Stitching also helps hold pleats in place. To topstitch, stitch ⅛ inch from the edge of the pleat. Begin at the top of the pleat and stitch through all layers of fabric down to the desired point. To edge stitch, stitch through only the fold of the pleat close to the fold edge. For additional information on topstitching and edge stitching, see Lesson 21, "Topstitching."



Name ____________________________

Date ________________ Period __________

Evaluation Criteria: Darts, Tucks, and Pleats

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

Darts	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
Darts are tapered to a fine point.				
Dart point is tied off.				
Darts are pressed down or toward center of garment.				
Darts fit curve of body.				
Threads are clipped.				

Tucks

Tucks are uniform in size.				
Tucks are pressed in the direction suggested by the pattern.				
Threads are clipped.				

Pin Tucks

Pin tucks show evidence of being stitched in the same direction. Fabric is not distorted.				
Stitching is straight; pin tucks are uniform in size.				
An appropriate stitching method was used.				
If a serger was used, the fabric has not been cut by the serger blades.				
Threads are clipped.				

Pleats

Pleats are uniform in size.				
Pleats lay in the direction suggested by the pattern.				
Pleats have been pressed appropriately to achieve the desired look.				
Topstitching, if any, is an even distance from the edge.				
Topstitching, if any, ends at the same point on each pleat.				
Threads are clipped.				

Lesson 25 Constructing Seams

Objectives

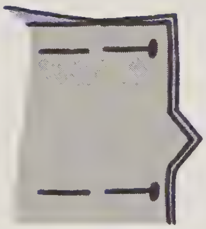
This lesson will help you stitch seams and finish seam edges. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 14: Seams
Lesson 15: Clipping, Notching, Trimming, and Grading
Lesson 16: Seam Finishes

Helps for Success

Well-constructed seams are the most basic part of any garment. For seam and seam finish variations, see Lessons 14 and 16. Other guidelines for sewing seams are given here.

Pin Basting Seams



The seam should be pinned before stitching. Match the ends of the seam and all notches. Pin the layers together.

Place the pins at right angles to the seam so that they may be easily removed during stitching. Remove pins before sewing over them.

Adding Stretch to Seams

Some seams will need to have more give. For instance, when sewing on knit fabric, seams should stretch with the fabric. Always test your stitching on a fabric scrap to see if it is strong enough to withstand any stress applied.

Sergers provide excellent stretch stitches. However, the following conventional sewing machine stitches also provide stretch: narrow zigzag, multiple stitch zigzag, straight stretch, overcast stretch, or serge (pine) stitch.

If you must use a straight stitch, some stretch may be added by gently pulling on the fabric in front of and behind the machine needle. Be sure you allow the fabric to feed under the machine foot as you pull gently. Test this method on your fabric because it may cause the seam to pucker.

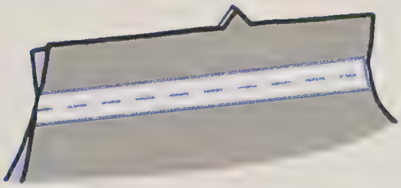
Directional Stitching

Seams should be stitched with the grain of the fabric. On an edge that has already been staystitched, seams may be sewn in any direction. This is because the area has already been stabilized. (For instance, the neck seam may be stitched in any direction.)

With napped or pile fabrics, stitch with the nap even if it is against the grain.

When you are unsure of the direction to stitch, a good rule is to stitch similar seams or seams that will be sewn together in the same direction. For instance, stitch all pant leg seams from the bottom to the top.

Stabilizing Seams



Stabilizing seams is especially useful on knit fabrics and in garment areas where greater stability is needed. Such areas include shoulder, armhole, neckline, crotch, and waistline seams.

To stabilize the seam, stitch narrow hem tape, twill tape, or sheer stay tape into the seam. Where some stability and more stretch is desired, as with knit fabrics, clear stretch elastic may be used.

Matching Plaids

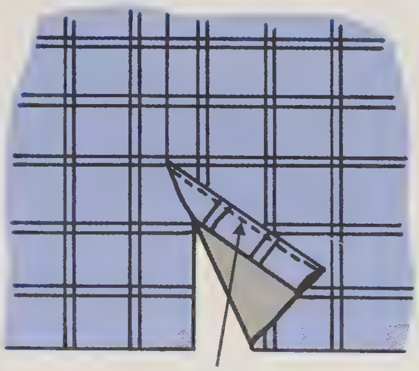
When stitching seams on plaid fabric, you will need to carefully match plaids along seamlines. Four methods can help you do this.

Method 1: pin basting. To match plaids by pin basting, follow these steps:

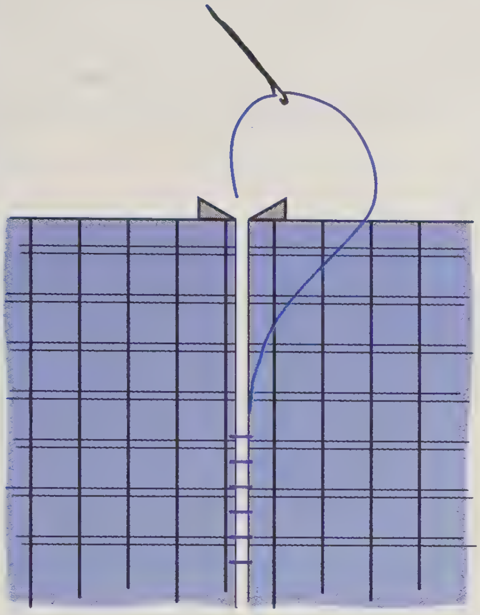
1. Pin the layers of fabric together. Make sure each pin is positioned in a manner that will line up the plaid on the two layers of fabric.
2. Stitch up to each pin before removing it.

Method 2: fusible thread. To match plaids using fusible thread, follow these steps:

1. Press one seam allowance under along the seamline, then open out the fold. With fusible thread in the top of the machine and regular thread in the bobbin, stitch on the right side of the fabric just inside the seam allowance. Fold seam allowance back to the wrong side.



(Continued)



2. Lap the pressed edge over the other garment piece. Match stitching lines and color bars. Press. Let cool. Open out fabric. Stitch seam.

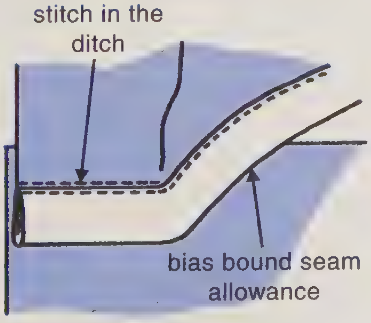
Method 3: hand basting. To match plaids by hand basting, follow these steps:

1. Press under a ⅝-inch seam allowance on the garment pieces that are to be sewn together.
2. With right sides of the garment pieces up, hand baste the seam together being sure to match the plaid.
3. Place right sides of garment pieces together again, and machine stitch the seam. Remove the hand basting stitches.

Method 4: basting tape or glue stick. To match plaids using basting tape or glue stick, follow these steps:

1. Press a crease along one seamline. Apply basting tape or glue stick in the seam allowance along the crease line.
2. Place the seam allowance of the second garment piece over the one with the tape or glue. Finger press both layers of fabric together, aligning the plaid as you go.
3. Turn pieces to the wrong side and machine stitch along the seamline.

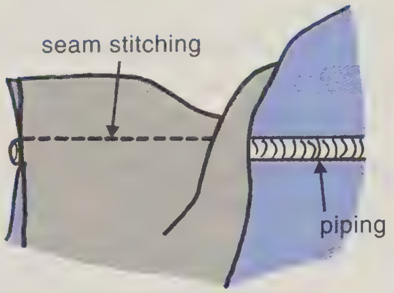
Decorative Seams



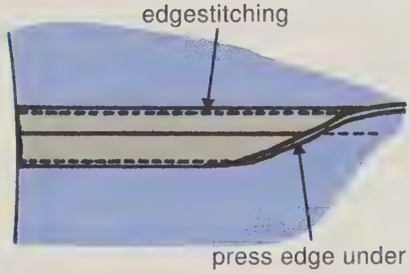
Decorative seams can add interest to garments. You may decide to use a fringed seam on sleeves or the back yoke or, perhaps, a piped seam on collar, lapels, and pockets. Consider the following decorative seams possible:

Bound and lapped seams. Begin by deciding which seam allowance you want to lap over the other. Then cut bias strips two times the finished width of binding plus 1¼ inches. Cut the strips the length of the seam plus 2 inches. Bind the overlapping seam allowance with bias binding. Then place the bias bound seam allowance over the other seam allowance matching seamlines. Stitch in the ditch created by the bias binding.

(Continued)

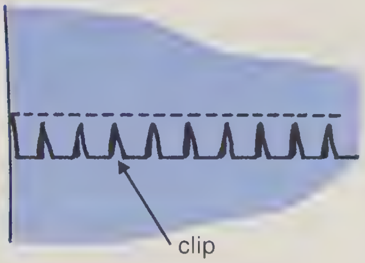


Piped seams. Single or double piping can be inserted into the seam. Try using piping in a contrasting color.

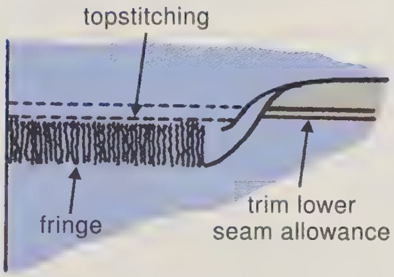


reversible fabric

Edgestitched seams. Using reversible fabric, stitch seams wrong sides together. Press seam open. Turn edges of seam allowances under and press. Pin in place. Stitch close to the folded edges, through all layers. The reverse side of the fabric in the seam allowance provides a decorative effect on the outside of the garment. This technique is best on straight seams or seams with only a slight curve. To make curved seams, stitch ¼ inch from the raw edge of the seam and clip to the stitch line.



Frayed seams. Use this seam with washable fabrics only. Test to make sure fabric frays as desired. Begin by cutting seam allowances from ⅜ inch to 2 inches in width. Stitch the seam with wrong sides together. Clip to within ⅛ inch of seamline, spacing clips ¼ inch to 1 inch apart. Wash and dry the garment several times until cut edges curl and fray.



Fringed seams. Begin by cutting out the garment with ¾-inch seam allowances in the areas you wish to fringe. Stitch the seam, wrong sides together. Trim one seam allowance to slightly less than ¼ inch. Lap the longer seam allowance over the shorter and topstitch ¼ inch from the seamline using a short stitch length. The seam is then raveled to make fringe. This technique is best used on straight-grained seams. Test to make sure fabric fringes as desired. Warp (lengthwise) and filling (crosswise) yarns may give a different look.

A fringed seam may also be constructed by making a fringe trim from a fabric strip and then inserting it inside other seams. For thicker fringe, use two layers of fabric. Stitch strips in the seam and then fringe.

Name ______________________________

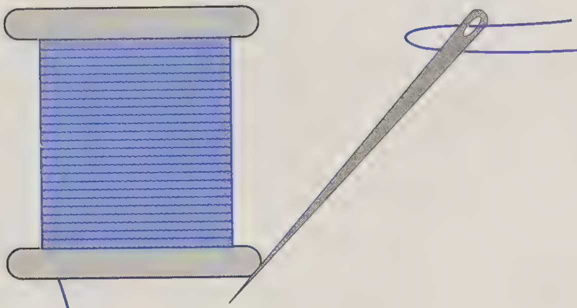
Date ____________________ Period ____________

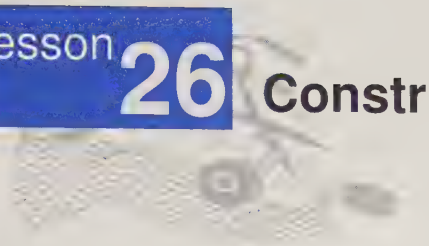
Evaluation Criteria: Seams

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
Stitching is straight.				
Seam is even in width.				
Edge of seam is finished appropriately for fabric being used.				
Seam is backstitched at both ends.				
Appropriate stitch and stitch length is used.				
Appropriate method of constructing the seam is used.				
Seam is pressed.				
Threads are clipped.				

notes





Lesson 26

Constructing Pockets

Objectives

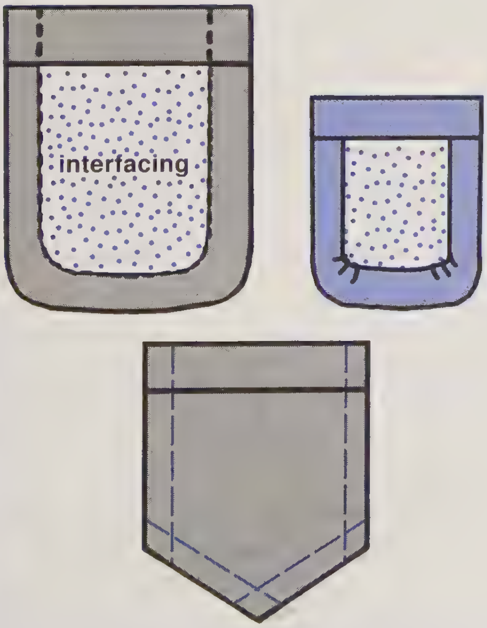
This lesson will help you construct pockets. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 9: Transferring Pattern Symbols to the Fabric
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 15: Clipping, Notching, Trimming, and Grading
Lesson 16: Seam Finishes
Lesson 17: Clean Finishing
Lesson 20: Interfacing
Lesson 21: Topstitching

Helps for Success

Pockets are functional, but they should be attractive as well. Whether you construct a patch pocket or a seam pocket, the pocket should be durable, usable, and neat. The following tips will help.

Perfectly Shaped Patch Pockets



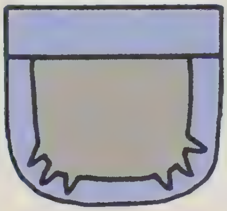
You can use two methods to achieve perfectly shaped patch pockets.

Method 1. Cut fusible interfacing to the finished size of the pocket. Cut accurately. Position the interfacing inside the seamlines on the wrong side of the pocket and fuse in place.

Complete the pocket hem according to the pattern instruction sheet. On the remaining edges of the pocket, press the seam allowance up over the interfacing. The interfacing provides shaping for the pocket as well as a guideline for pressing over the seam allowance.

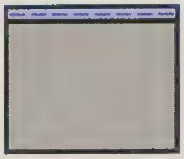
Method 2. Stitch along the pocket seamline. Be careful to stitch accurately This will provide a guide for turning and pressing the pocket seam allowance.

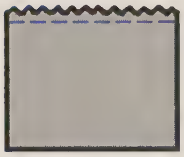
Eliminating Bulk



Excess fabric must be removed from the seam allowance at the corners of pockets. Cut small notches of fabric from the seam allowance on curved areas. Cut diagonally across square corners. This will allow corners to lie smooth when pressed.

Hemming





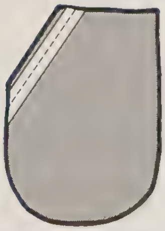
Finish the top edge of the pocket using a method that is appropriate for the fabric.

Light- to medium-weight fabrics. Turn under the edge ¼ inch and stitch close to the folded edge.

Heavier fabrics. Zigzag or serge stitch the hem edge.

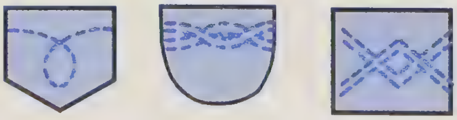
Stable knits and tightly woven fabrics. Stitch ¼ inch from the edge and pink.

Stays for Bias-Cut Pocket Edges



Many pockets have a bias-cut edge. The bias will stretch. You can stabilize this edge by stitching a piece of hem tape, twill tape, or sheer stay tape over the seam allowance. Attach the tape as a first step. Then continue pocket construction as directed by your instruction sheet.

Topstitching



Topstitching may serve either a functional or decorative purpose on pockets. Functional stitching is used to prevent the pocket facing from rolling to the outside of the garment or to stitch the pocket to the garment. When using decorative topstitching, create your own interesting stitching designs. For ideas on maintaining even stitching, see Lesson 21, "Topstitching."

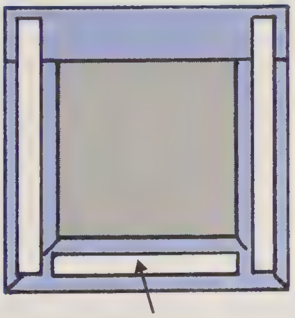
Positioning Patch Pocket

Do not feel that you must place pockets in the exact location indicated by the pattern. Place the pockets to enhance the appearance of the garment. A slight change in location may make the garment more attractive on you.

Take the following precautions to make sure the pockets are lined up correctly:

- If you are positioning the pockets according to the pattern symbols, use a chalk pencil or pins to transfer the symbols to your fabric. Position the pockets; pin in place.
- If you are lining up two pockets, one on each side of the garment, measure from the edge of the garment to the pockets. Then you will be sure they are the same on both sides of the garment.
- Look to make sure the pockets are correctly located. Be sure to check and see how they look with the garment on the body.

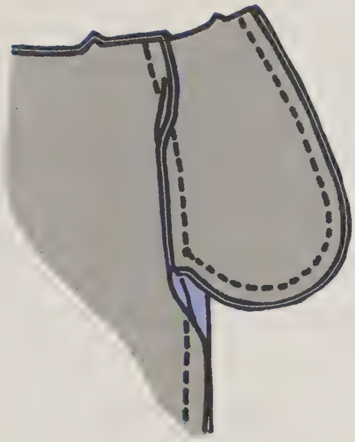
Applying Pockets with Fusible Web



To apply the pocket using fusible web, follow these steps:

1. Cut ¼ inch strips of paper-backed fusible webbing. Position the strips in the seam allowances on the underside of the pocket. Position the strips about ¼ inch from the edge of the pocket. Place the web side next to the pocket, paper side up. Press the strips in place.
2. Remove the paper backing from the fusible web. Position the pocket on the garment according to pattern symbols. Make sure you have the pocket positioned correctly.
3. Cover the pocket with a press cloth and fuse to the garment.
4. Edgestitch the pocket in place.

In-Seam Pockets



In-seam pockets are attached in the seam of a garment. They usually do not show on the outside when the garment is finished.

Use lining fabrics, if possible, for in-seam pockets. This will cut down on bulk and give a flatter look in the hipline and stomach areas. When using lining fabric for in-seam pockets, be sure the pocket will not show when the garment is worn.

Construct in-seam pockets according to the pattern instruction sheet.

Name ____________________________________

Date ____________________ Period ____________

Evaluation Criteria: Pockets

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
An approved procedure was followed.				
Pockets are uniformly shaped.				
An appropriate method was used to finish the hem.				
Pockets are clipped and trimmed where necessary.				
Bias-cut areas are stabilized with a stay.				
Lining fabric is used when possible to reduce bulk.				
Pockets are positioned evenly on the garment.				
Threads are clipped.				
Garment appears to have been pressed as sewn.				
Topstitching is an even distance from edge.				
Pockets are cut out on the straight of grain.				

notes

Lesson 27 Constructing Ties

Objectives

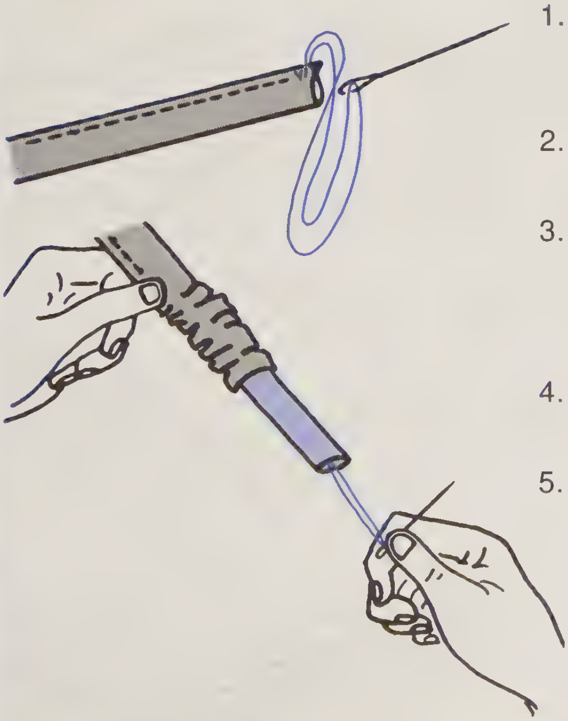
This lesson will help you construct ties. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 14: Seams
Lesson 15: Clipping, Notching, Trimming, and Grading
Lesson 22: Hand Stitching

Helps for Success

Ties made of fabric that coordinates with a garment are an attractive detail. Whether ties are wide or narrow, they can be constructed easily with a few simple guidelines.

Turning Narrow Ties



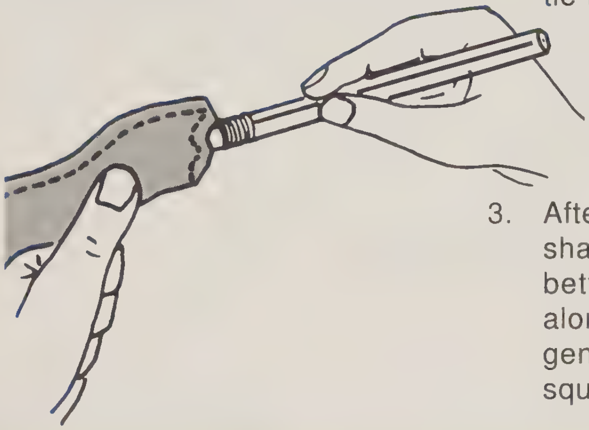
Narrow ties can be difficult to turn right side out. To turn a narrow tie, follow these steps:

1. Prepare the tie for turning as directed by your pattern instruction sheet. Do *not* sew across either end of the tie.
2. Thread a needle with a very long double thread.
3. Attach the end of the thread to the tie as shown. Be sure the thread is securely attached. You do not want it to pull out as you are turning the tie.
4. Push the *blunt* end of the needle through the tie. Be sure not to pick up any of the fabric.
5. Once the thread and needle are through the tie, begin working the fabric through. Pull on the threaded needle with one hand and use the other hand to assist the fabric along.

Turning Wide Ties

To turn a wide tie, follow these steps:

1. Prepare the tie for turning as directed by your pattern instruction sheet. Stitch across one end of the tie.
2. Begin at the stitched end of the tie. With an unsharpened pencil or similar blunt object, push the end of the tie through the tube. (A ruler works well for larger ties.) Continue to work the fabric over the pencil until the tie has been turned right side out.

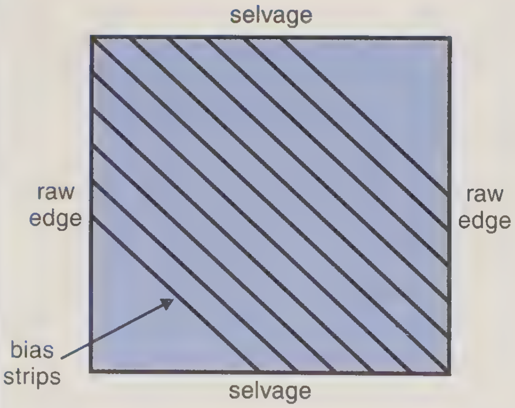


3. After turning the tie, press it. To make sharp, well-defined edges, roll the seam between the thumb and fingers. Press along the seam. Also, use a needle or pin to gently pull out the corners and make them square.

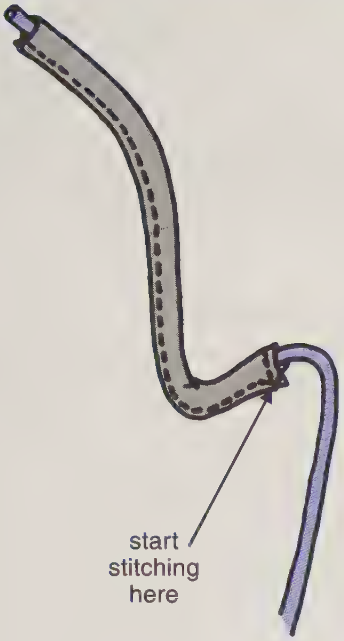
Making Corded Tubing

You can sew corded tubing into seams as a decorative trim. To make corded tubing, follow these steps:

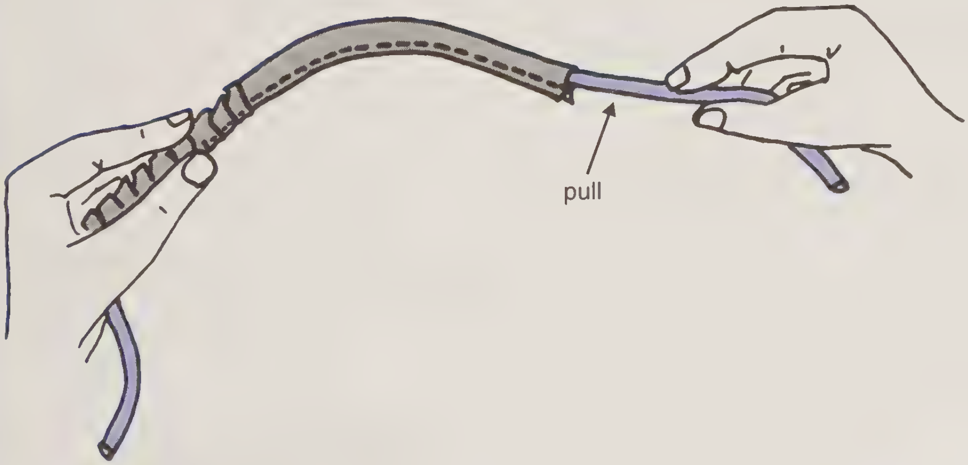
1. Determine the length of tubing you will need. Add several inches to the total called for by your pattern.
2. Cut bias strips of fabric for the tubing. To get the required length of tubing, sew the strips together, if necessary.
3. Cut a piece of cording that is twice the length of the tubing strip.
4. Leave ½ inch of cord free at one end. Fold the fabric strip, wrong side out, around the cord. Pin the edges together. Leave half of the cord free at the other end.



(Continued)



5. Attach a zipper foot to your sewing machine. Start at the end of the tubing from which the long end of the cording extends. Stitch across the end of the tubing from the raw edge to the fold. Lift the presser foot and turn the tubing 180 degrees. Lower the presser foot and stitch back through the end of the tubing over the first stitching.
6. Leaving the needle in the fabric, lift the presser foot and pivot the tubing 90 degrees. Stitch the length of the tubing close to the cording. Do not catch the cording in the seam. Stretch the strip slightly as you stitch. Remove pins before stitching over them. Backstitch at end of seam.
7. Trim seam allowance to ¼ inch.
8. Turn the tubing by pulling on the loose ½ inch of cording with one hand. With the opposite hand, assist the fabric along over the free half of the cord.
9. After the tubing has been turned, trim off the extra cording at both ends.
10. Push back the tubing at each end and trim off an additional ¼ inch of cording. Tuck the raw edges of the tubing inside and slip stitch each end closed.



Name ______________________________

Date ________________ Period __________

Evaluation Criteria: Ties

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
Ties are the same width throughout the full length.				
Ties are pressed on the seam edge.				
Threads are clipped.				
Ties are attached to the garment at the location indicated by pattern.				
Hand tacking shows as little as possible and knots are hidden.				

Lesson 28

Constructing Waistline Seams and Stays

Objectives

This lesson will help you to construct a waistline seam and stay. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 14: Seams
Lesson 16: Seam Finishes
Lesson 19: Easing and Gathering

Helps for Success

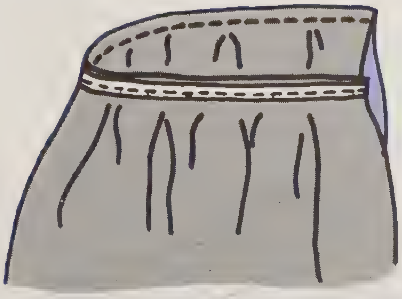
Waistline seams are fairly easy to construct. The guidelines below will help.

Stitching the Waistline Seam

To stitch a waistline seam, follow these steps:

1. Adjust any tucks, gathers, or pleats that are indicated on the pattern.
2. Baste the bodice and bottom units together. Be sure to keep a ⅝ inch seam allowance.
3. Try on the garment and check the waist fit.
4. Permanently stitch the seam and then finish the seam edge if needed. If you wish to use a stay, follow the directions below.

Attaching the Stay



A stay adds stability to a waistline seam. It allows the seam to withstand the stress often given to this garment area. It also prevents this seam from stretching. The stay should be a nonstretch tape, such as hem tape or twill tape.

Cut the tape the same length as the waistline seam. Position the tape over the waistline seam and stitch in place.

The finished seam is generally pressed toward the bodice.

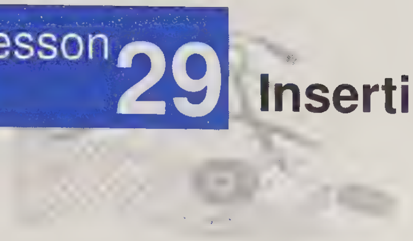
Name ______________________________

Date ____________________ Period ____________

Evaluation Criteria: Waistline Seam and Stay

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
An approved procedure was followed.				
Seam is ⅝ inch in width.				
Seam is finished appropriately for fabric.				
Machine stitching is straight and appropriate length.				
Any tucks or gathers are evenly distributed.				
Bodice and lower part of garment are joined according to pattern symbols.				
Garment shows evidence of pressing. Seam is pressed in recommended direction.				
Threads are clipped.				
Stay is a nonstretch material (twill tape or hem tape).				
Stay is stitched securely and centered over waistline seam.				
Waistline fits body.				



Lesson 29

Inserting Zippers

Objectives

This lesson will help you insert a zipper. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 13: Staystitching
Lesson 14: Seams
Lesson 16: Seam Finishes
Lesson 21: Topstitching

Helps for Success

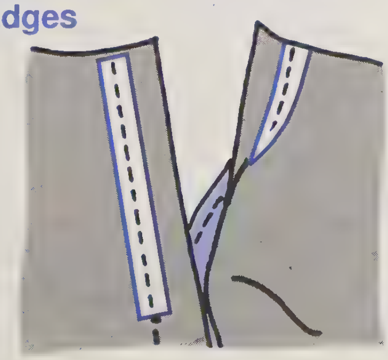
There are a number of methods for inserting zippers. For example, there are methods for inserting lapped and centered zippers. Special methods can be used to insert zippers in stretch knit fabrics or to make an invisible zipper. Helps for a variety of methods can be found on these pages. Select the method that is most appropriate for your fabric and garment.

Preparing the Seam

Finish the edge of the seam allowance where the zipper will be inserted according to the requirements of your fabric.

In most cases, the seam below the zipper opening should be stitched closed. When inserting an invisible zipper, the seam is not stitched below the zipper until after the zipper is inserted.

Bias Cut Edges

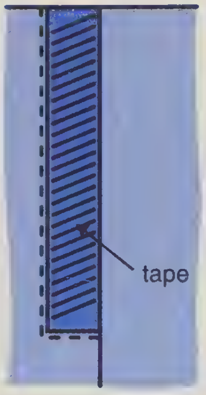


Sometimes a zipper must be inserted into a bias cut seam. This can create a problem because the bias will stretch. To prevent this problem, pin and stitch a strip of hem tape, twill tape, or sheer stay tape along the seamline of the bias edges. Stitch the tape to the wrong side of the fabric. Be sure not to stretch the fabric as you sew.

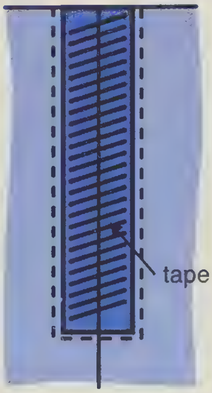
If the Zipper Is Too Long

Synthetic coil zippers are self-locking at any point along the zipper. Therefore, you may cut them off at either the bottom or top. However, never cut off the excess until you have sewn over the tape. You do not want the slider to zip off the zipper tape.

For Even Topstitching



lapped zipper



centered zipper

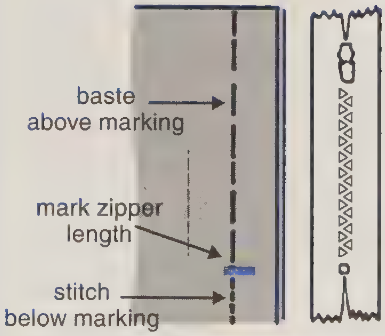
Many zippers are inserted by topstitching through the right side of the fabric. Keeping topstitching straight and even will give your garment a professional look.

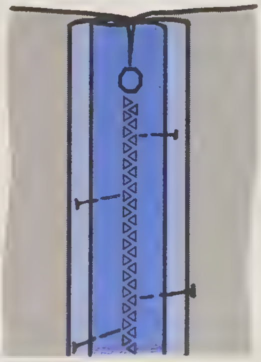
Clear, plastic guides are available to make topstitching easier. Begin by selecting the desired finished seam width on the guide. Then place the teeth on the underside of the guide along the seamline. With the zipper foot in place, stitch along the edge of the plastic guide.

If plastic guides are unavailable, try using ½-inch wide cellophane or masking tape as a topstitching guide. Place the tape along the folded edge for a lapped zipper. Center it over the seam for a centered zipper. Stitch along the edge of the tape.

Do not use this method on velvet or corduroy because it may damage the pile. Test your fabric if you are in doubt whether to use tape as a stitching guide.

Centered Zipper

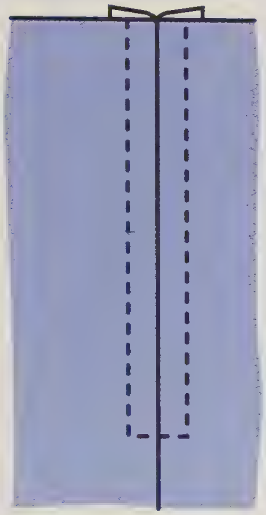




A centered zipper application is used for center back locations in dresses, jumpers, and skirts. It is also used for center front zippers on dresses, jumpers, and jumpsuits. To apply a centered zipper, follow these steps:

1. Mark the length of the zipper on the seam into which it will be inserted. Generally, the top edge of the zipper tape is placed even with the top of the seam.
2. Stitch the seam closed below the zipper marking.
3. Baste the seam closed above the zipper marking.
4. Press the seam open.
5. Center the zipper facedown over the seam allowance. Make sure the coil is exactly over the seam. Pin in place. Baste or secure with basting tape. Remove pins.

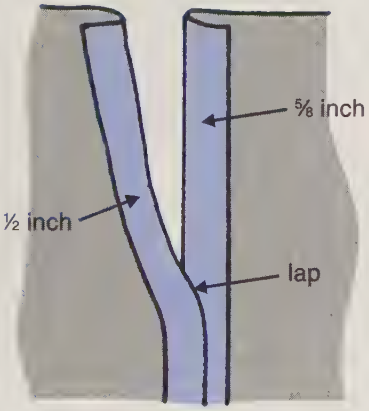
(Continued)



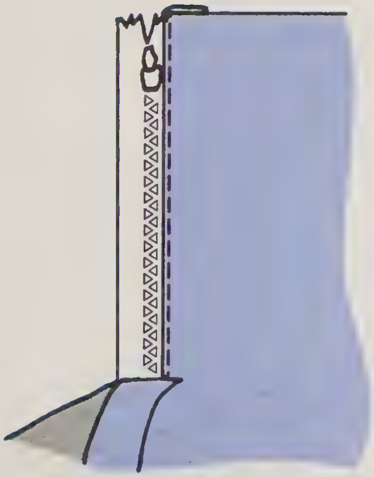
6. Select a method to ensure even topstitching. (See Lesson 21, "Topstitching.")
7. Attach the zipper foot to the sewing machine. On the outside of the garment, stitch the zipper in place. Stitch each side separately, beginning at the bottom and stitching to the top.
8. Remove the basting threads used to sew the seam together and to baste the zipper in place.

Lapped Zipper Method One

Use lapped zippers for skirt zippers, pant side seam or back zippers, and some back zippers on dresses or jumpers. To insert a lapped zipper in a side seam, follow these steps:

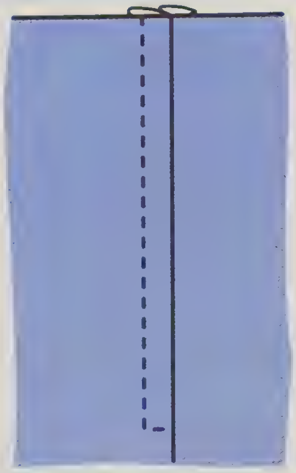


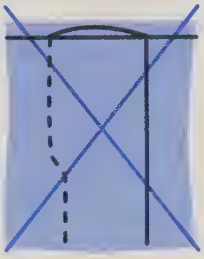
1. Mark the length of the zipper on the seam. Stitch the seam below the marking.
2. Press the front edge of the zipper opening to the wrong side along the seamline.
3. Press the back edge of the zipper opening to the wrong side. Press this side under ½ inch.

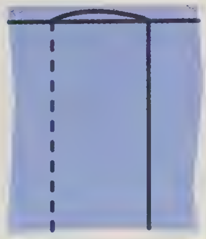


4. With the garment piece right side up, pin the zipper along the edge with the ½-inch allowance. The folded edge should be placed close to the zipper coil.
5. Attach the zipper foot to the sewing machine. Stitch close to the folded edge of the seam allowance. Stitch from the bottom of the zipper to the top.

(Continued)



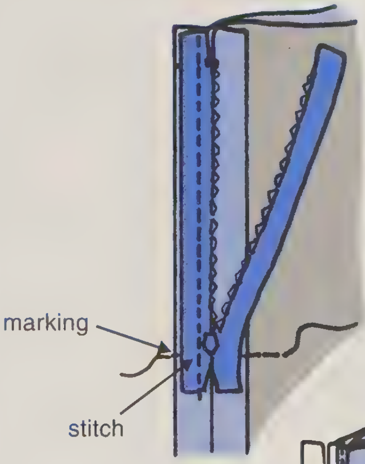


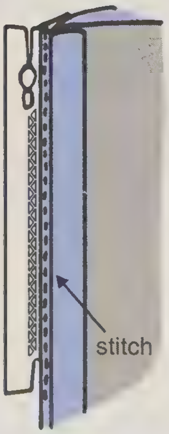


6. Lay the ⅝-inch seam allowance over the zipper. Place the folded edge so that it just covers the row of machine stitching made in the last step. Pin in place.
7. Select a procedure to help you topstitch evenly. (See Lesson 21, "Topstitching.")
8. Start at the bottom of the zipper. Stitch across the end. Pivot and stitch to within 1 inch of the top of the zipper. Leave the needle in the fabric. Lift the presser foot and zip the head of the zipper down. Lower the presser foot and continue stitching to the top of the zipper. This procedure will make sewing around the head of the zipper easier.

Lapped Zipper Method Two

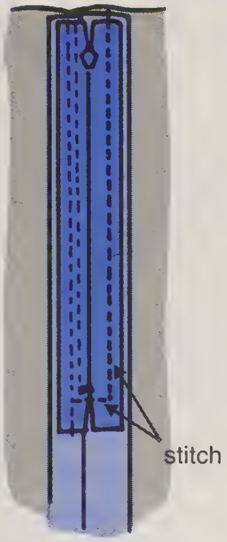
The following steps describe a second method for inserting a lapped zipper:





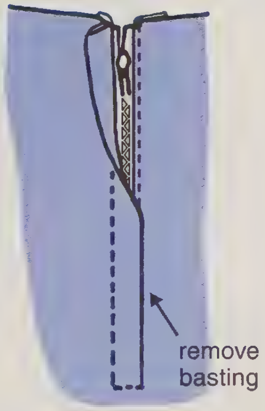
1. Place the zipper on the seamline with the top of the zipper tape even with the edge of the fabric. Mark the placement of the bottom stop of the zipper. Stitch the seam closed below the marking. Machine baste the seam closed where the zipper will be inserted. Press the seam open.
2. Lay the garment with the wrong side facing you. Extend the left seam allowance, opening out the left side of the garment underneath the right side. Place the opened zipper face-down on the extended seam allowance. Make sure the bottom stop is at the marking and the zipper teeth are close to the seamline, as shown. Pin in place. Attach the zipper foot to the machine and position it to the right of the needle. Stitch the zipper to the seam allowance, stitching from the bottom of the zipper to the top.
3. Close the zipper and turn it faceup so that it extends away from the garment, as shown. The seam allowance will form a

(Continued)



narrow fold along the right side of the zipper. Position the zipper foot to the left of the needle. Stitch close to the folded edge of the seam allowance, stitching from the bottom of the zipper to the top.

4. Lay the garment flat with the wrong side facing you and the zipper face down. Pin the zipper in place through the right seam allowance. Stitch across the bottom and up the right side of the zipper. Stitch through the zipper tape, the right seam allowance, and the garment. (If desired, you may stitch with the outside of the garment up. Experiment to see which way works best for you.)



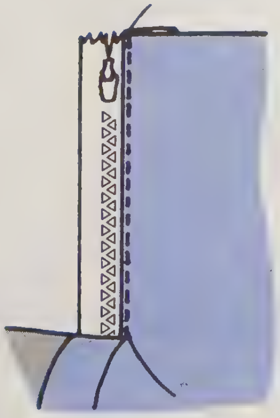
5. Remove the basting stitches holding the seam together over the zipper. Using a press cloth, press the zipper area.

Fly Front Zipper

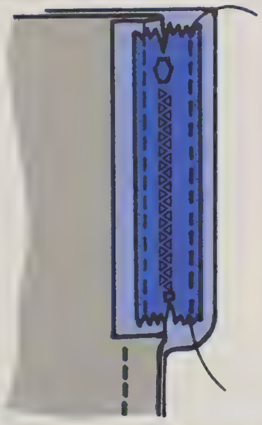
Fly front zippers are most often used for front openings on jeans and slacks. This type of zipper requires an extension on the garment where the zipper is to be placed. Many patterns include a separate extension piece, or placket, which is sewn to the garment before the zipper is applied.

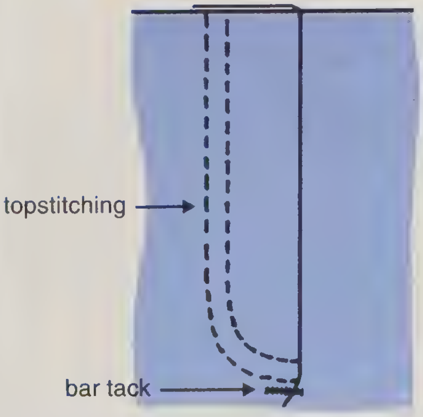
Methods of applying fly front zippers vary with different pattern instruction sheets. Use the following helps as they apply to your instructions:

1. Mark the location of the zipper and stitch the front crotch seam below the zipper marking.
2. Press under the right and left front seam allowances as shown on your pattern instruction sheet. Note that each side is pressed under a different amount.
3. Pin the zipper along the left front seam allowance.
4. Attach the zipper foot to the sewing machine. Stitch close to the folded edge of the seam



(Continued)

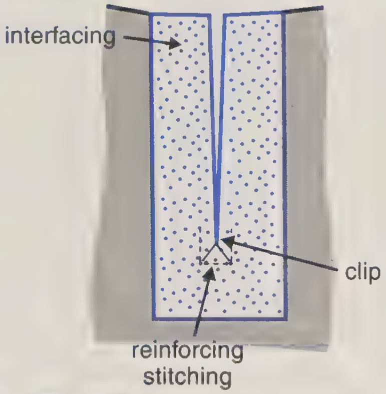


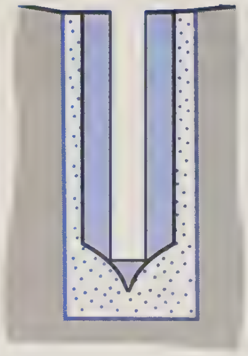


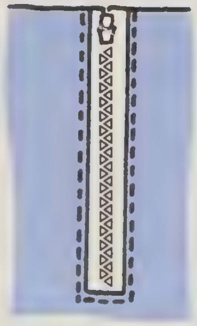
allowance. This edge should be close to the zipper coil. Stitch from the bottom of the zipper to the top.

5. Place the garment pieces right sides together. Make sure the zipper lies flat. Stitch from the bottom to the top of the zipper tape, as shown.
6. Turn the garment right side up. Use a chalk pencil to sketch in stitching lines to ensure even topstitching. Topstitch on the right side using as many rows of stitching as desired.
7. For jeans, you may wish to add a bar tack at the bottom of the zipper. This will provide extra reinforcement in an area of the garment that receives a lot of strain. To make a bar tack, set the sewing machine for a narrow zigzag stitch with a short stitch length. Insert the machine needle just to the left of the seamline below the last row of topstitching. Stitch across the seamline and continue stitching about ¼ inch beyond it. Backstitch the entire length of the bar tack. You may wish to practice making a bar tack on a scrap of fabric before sewing on your garment.

Stretch Knit Zipper Insertion





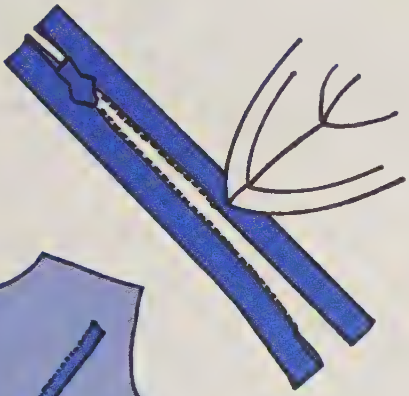


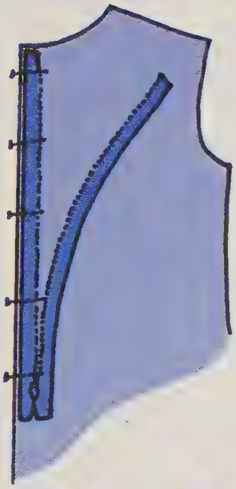
When inserting a zipper into a stretch knit garment, you need to take steps to keep the zipper from rippling. The recommended zipper insertion technique results in the zipper coil being visible on the outside of the garment.

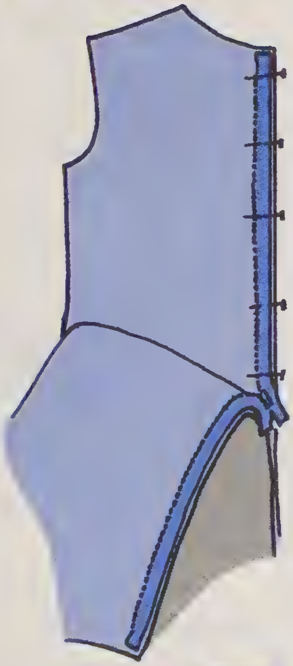
To insert a zipper into stretch knit fabric, follow these steps:

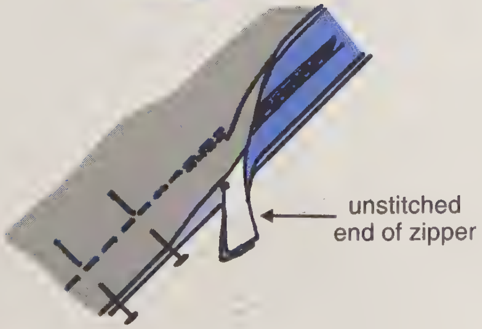
1. Fuse a piece of tricot knit interfacing, cut on the lengthwise grain, to the wrong side of the area into which the zipper will be inserted.
2. Reinforce stitch around the bottom of the zipper opening along the seamline.
3. Clip as shown.
4. Press under the seam allowance around the zipper opening.
5. Pin the zipper in the opening, or secure the zipper with a fusible web by doing the following. Cut a narrow strip of paper-backed fusible web the length of the zipper tape. Place the strips, web side down, on the right side of the zipper tape. Press in place. Remove the paper backing and position the zipper in the opening. Press.
6. Attach the zipper foot to the sewing machine. Stitch close to the folded edges.

Invisible Zipper Insertion









An invisible zipper is a special type of zipper that has no teeth showing on the right side. When inserted, no topstitching shows on the outside of the garment, and the appearance of the seamline is not changed. This type of zipper is most often used for center back or front zippers.

To insert an invisible zipper in a garment, follow these steps:

1. Use a special sewing machine foot designed for inserting invisible zippers. You can buy this type of foot at most sewing centers. You must assemble the foot according to the sewing machine model you are using. Follow the directions that come with the attachment.
2. Do *not* stitch the garment seam together in which the zipper will be inserted.
3. Open the zipper and lay it upside down on the ironing board. With the tip of the iron, press the zipper tape flat.
4. Place the open zipper facedown on the right side of the right garment piece, as shown. The top of the coil should be ⅝ inch from the top edge of the garment along the seamline. Pin in place.
5. Stitch the zipper to the garment, making sure that the zipper coil feeds into the right-hand groove of the zipper foot. Make sure the zipper coil remains in position along the seamline. Remove pins before sewing over them. Stitch until the foot reaches the stop at the end of the zipper and then backstitch.
6. Place the free side of the zipper on the right side of the left garment piece, as shown. Make sure the zipper is the same distance from the top of the garment piece as it was on the completed side. Position the coil along the seam allowance and pin in place. Stitch as before. This time make sure the coil feeds into the left-hand groove of the zipper foot. Begin stitching at the top of the zipper. Backstitch when you reach the zipper stop at the bottom.
7. Close the zipper. From the wrong side of the garment, pin the seams together. Lift the bottom, unstitched end of the zipper out of the way. Move the needle to the side of the zipper foot. Stitch, beginning as close as possible to where the zipper has been sewn to the garment. Stitch several inches. Change to a regular machine foot and stitch the rest of the seam.

Name ______________________________

Date ________________ Period __________

Evaluation Criteria: Zipper

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
Seam allowance is ⅝ inch.				
Seam is finished appropriately for fabric.				
The appropriate method is used for the type of zipper and garment.				
There is no gap at zipper top.				
Zipper does not ripple. If bias cut, a stay is used.				
Topstitching is an even distance from edge.				
Head of zipper does not show. Zipper does not show (except for knit method).				
Threads are clipped.				
Backstitching is not noticeable on right side of garment.				
Shows evidence of having been pressed as sewn.				

Lesson 30

Constructing Placket Openings

Objectives

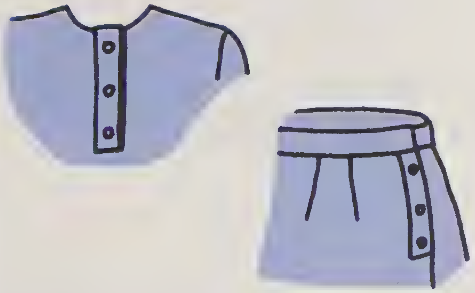
This lesson will help you construct a placket. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 14: Seams
Lesson 15: Clipping, Notching, Trimming, and Grading
Lesson 20: Interfacing
Lesson 21: Topstitching
Lesson 22: Hand Stitching

Helps for Success

There are various types of plackets and methods of insertion. Follow your pattern instruction sheet and the helps given here.

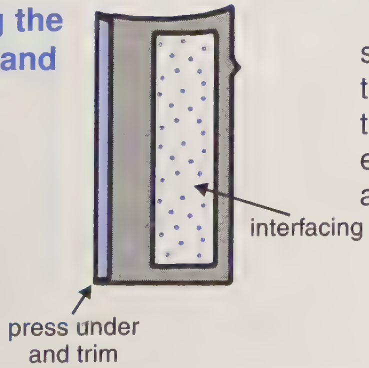
Types of Plackets



Plackets are a type of garment opening. They make the garment easier to put on and take off. Plackets are often located at necklines on shirts and dresses, waistlines on skirts and pants, and cuffs on sleeves.

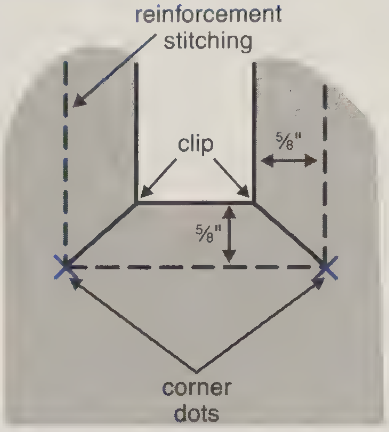
There are three main types of plackets. These are the faced placket, the continuous lap placket, and the banded placket. For information on attaching a continuous lap placket, see Lesson 36, "Constructing Sleeve Openings." This lesson will focus on constructing a banded placket.

Preparing the Placket Band



Plackets are generally interfaced to provide shape and support. Apply interfacing according to your pattern instruction sheet. Press under the seam allowance on the long, unnotched edge of the placket band pieces. Trim the seam allowances to ⅜ inch.

Matching Symbols and Reinforcing Corners

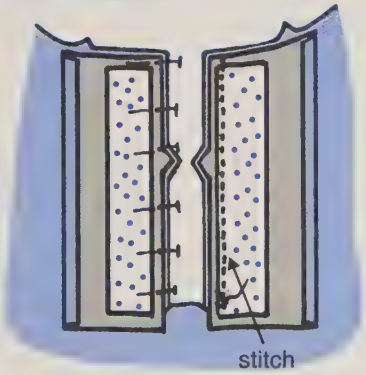


Matching symbols is a critical step in constructing a placket. To match symbols accurately, you must first carefully transfer them from your pattern to the garment piece.

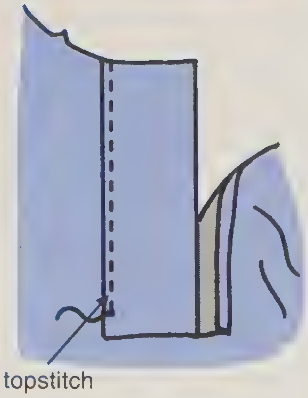
Place a row of reinforcement stitching along the stitching line around the placket opening in the garment. Stitch accurately. Clip to the corner dots, being careful not to clip the reinforcement stitching.

Attaching the Placket

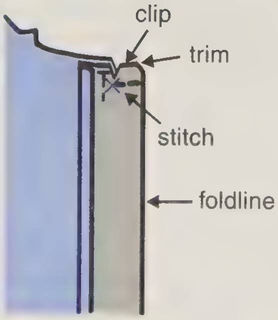
How a placket is attached to a garment will depend on the placket design and its location on the garment. Follow your pattern instructions carefully. Follow these steps for attaching a front neck opening placket:



1. With right sides together, pin one placket band to each opening edge of the garment front. Stitch, ending at small dots. Grade seam allowances. Press seam toward the band.

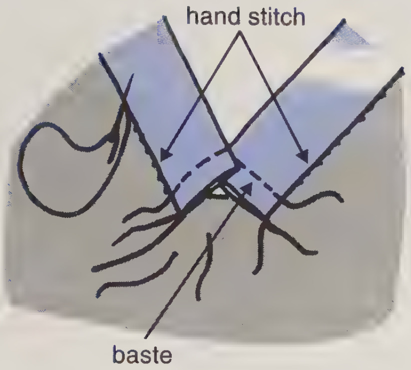


2. Topstitch each placket band along the seam, ending at lower small dot, as shown.

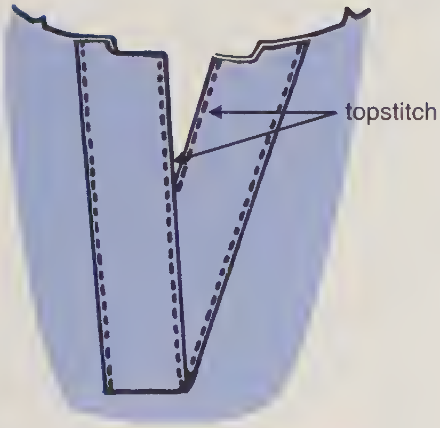


3. Turn bands to outside along foldlines, forming self-facings. Pin facings at neck edge. Stitch to dot. Trim. Clip to dot.

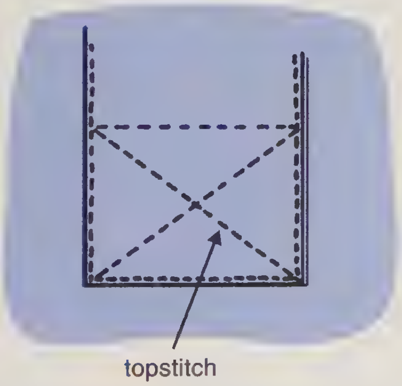
(Continued)


hand stitch
baste

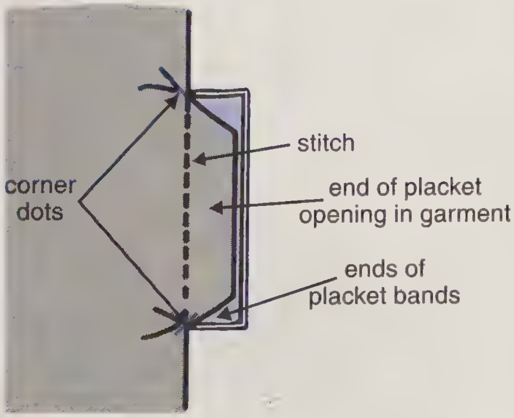
4. Turn placket band self-facings to inside. Press. Slipstitch pressed edge of self-facings over seams from small dots to the neckline. Baste across lower raw edge of each placket band.



5. Topstitch front opening.



6. On outside, lap right front band over left. Topstitch along stitching lines through all thicknesses, as shown.


stitch
corner dots
end of placket opening in garment
ends of placket bands

7. On the inside, pull the garment away from the triangular end of the placket opening. Stitch this triangular end to the lower ends of the placket bands. Be very accurate as you stitch this line. Be sure to stitch from corner dot to corner dot. If you do not, you will find that the placket does not lie smoothly on the outside of your garment. Press the seam down.

Name ______________________________

Date ________________ Period __________

Evaluation Criteria: Placket Openings

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
An approved procedure was followed.				
Sides of placket are even in width.				
Placket is interfaced to provide desired shaping.				
Placket laps neatly at bottom.				
Topstitching, if any, is an even distance from edge.				
Seams are trimmed to eliminate bulk.				
Hand stitching, if any, is uniform in size and shows as little as possible. Knots are hidden.				
Threads are clipped.				
Shows evidence of having been pressed as sewn.				
Placket piece is cut on the straight of grain.				

Lesson 31

Constructing Facings

Objectives

This lesson will help you construct a facing. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 14: Seams
Lesson 15: Clipping, Notching, Trimming, and Grading
Lesson 16: Seam Finishes
Lesson 17: Clean Finishing
Lesson 18: Understitching
Lesson 20: Interfacing
Lesson 22: Hand Stitching

Helps for Success

Facings are needed to finish raw edges of a garment. They are most frequently located at front and back openings, necklines, armholes, and waistlines. In each case, the basic steps used to construct the facing will be the same.

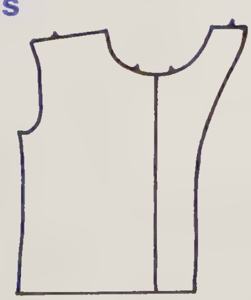
Types of Facings

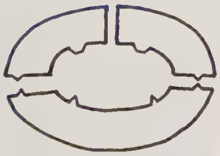
There are three basic types of facings: extended, fitted, and bias.

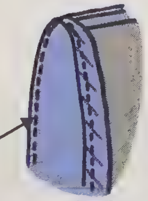
An *extended facing* is cut as one piece with the garment section. During construction, the facing folds to the inside of the garment. Extended facings are often used at front and back openings.

A *fitted facing* is a separate pattern piece cut the same shape as the garment area to be faced. During construction, it is stitched to the garment edge and turned to the inside. Fitted facings are most often found at necklines, waistlines, and armholes.

Another type of facing is a *bias facing*. This type of facing is constructed with bias tape or bias strips cut from the fashion fabric. Like a fitted facing, a bias facing is stitched to the garment edge and turned to the inside. Bias facings are often used at necklines, armholes, and sometimes waistlines.

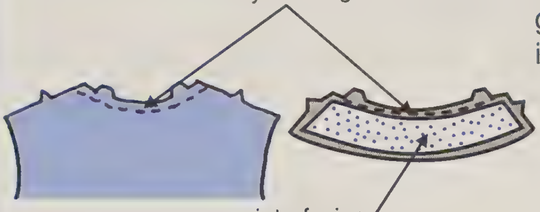

extended facing


fitted facing



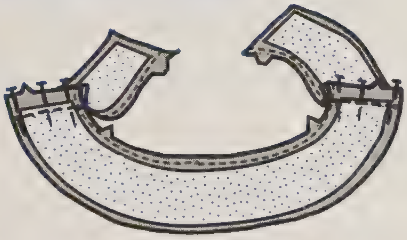
bias facing

Preparing the Garment and the Facing



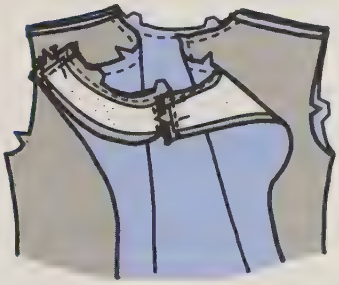
Staystitch neckline and waistline edges of garment pieces to which facings will be attached. This will prevent stretching during fitting and construction. Also, apply interfacing to garment areas as directed by your pattern instructions.

Clean Finishing the Facing Edge



pinned & stitched fitted facing

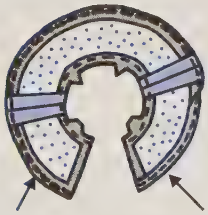
The outside edges of extended and fitted facings need to be clean finished to keep them from raveling. Before clean finishing, you need to sew facing pieces together. Pin facing pieces with right sides together. All edges of facing pieces may not line up exactly. Carefully match notches to make sure the edges meet where the seam will be stitched. Stitch a ⅝-inch seam. Trim seam allowances to ½ inch and press open.



pinned & stitched extended facing

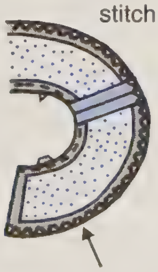
To clean finish the facing edge, use one of the following methods.

Method 1. Use this method with most fabrics. Follow these steps:

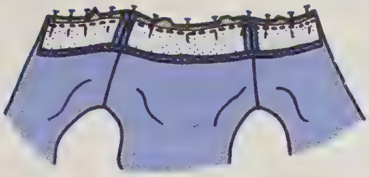

stitch ¼ inch from edge
turn under along stitching and stitch again

1. On the outside edge of the facing only, stitch ¼ inch from the edge. Do not eliminate this step. It will help you keep the edge of the facing smooth and rounded.
2. Press under ¼ inch using the stitching line as a guide.
3. Stitch again along the edge of the facing that has been turned under.

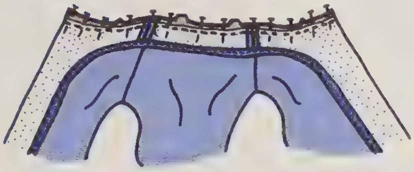
Method 2. Use this method with heavier fabrics. Zigzag or serge the facing edge. You can also stitch ¼ inch from the facing edge and then pink the edge using pinking shears.



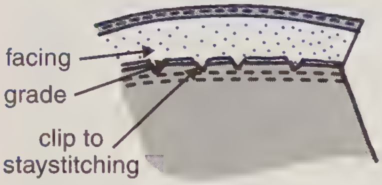
Attaching the Facing to the Garment



attaching fitted facing



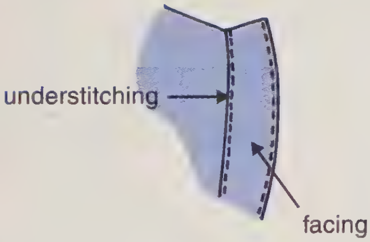
attaching extended facing



To attach the facing to the garment, place the right sides of the facing and garment together. If the garment has an extended facing, fold it back, as shown. Pin the facing to the garment, matching notches, seams, and other markings. Pin at the notches and seams first, then pin at short intervals around the facing. Stitch the facing to the garment ⅝ inch from the edge.

After stitching the facing to the garment, grade and clip the seam. Grade the seam by trimming the various layers to differing widths. Clip the curved areas to, but not through, the staystitching at ½-inch intervals. These steps will allow facings to lie flat in curved areas of the garment. Press the seam toward the facing.

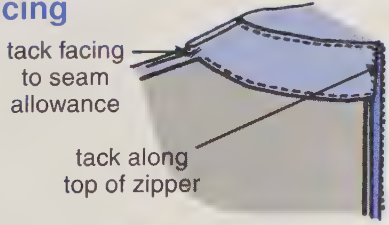
Understitching

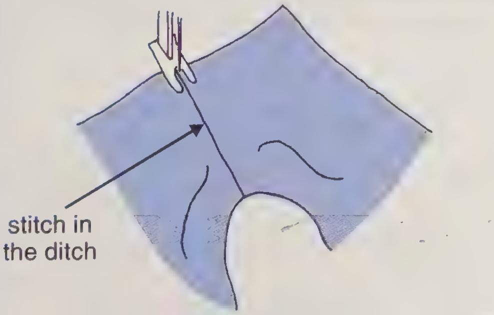


Understitching will prevent the facing from rolling to the outside of the garment. Be sure that the facing seam is pressed toward the facing and that it stays in that position while you are understitching.

Understitch by stitching around the facing, through the facing and seam allowance, as close to the seam as possible. Turn the facing to the inside of the garment and press.

Securing the Facing





To keep the facing in place, you can secure it in one of three ways. You can tack the facing to the garment seam allowances and along the top edge of the zipper. Make small, neat stitches that will not show through to the right side of the garment.

A second way to secure the facing is to "stitch in the ditch." Smooth out the facing and pin it in place at the seamlines. With the garment right side up, stitch in the ditch formed by the garment seam, stitching through the facing.

A third way to secure the facing is to place a small strip of fusible web under the facing along the seam allowance. Position the facing over the fusible web and press to fuse.

Name ______________________________

Date ________________ Period __________

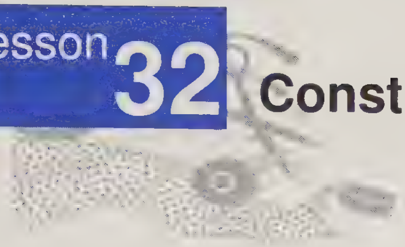
Evaluation Criteria: Facings

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
An approved procedure was followed.				
Facing pieces are cut out on the straight of grain.				
Curved edges of garment and facing are neatly staystitched where necessary.				
Interfacing is used where necessary.				
Facing edge is clean finished.				
Seam stitching curves smoothly.				
There are no tucks in the seams.				
Seams are trimmed, clipped, and graded where necessary.				
Facing is understitched.				
Threads are clipped.				
Shows evidence of having been pressed as sewn.				
Stitch in the ditch or hand tacking neatly done to secure facing where needed.				
Hand stitching is uniform size and shows as little as possible. Knots do not show.				
Facings fit curve of body smoothly.				

Lesson 32

Constructing Yokes



Objectives

This lesson will help you construct a yoke. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 14: Seams
Lesson 15: Clipping, Notching, Trimming, and Grading
Lesson 16: Seam Finishes
Lesson 19: Easing and Gathering
Lesson 21: Topstitching

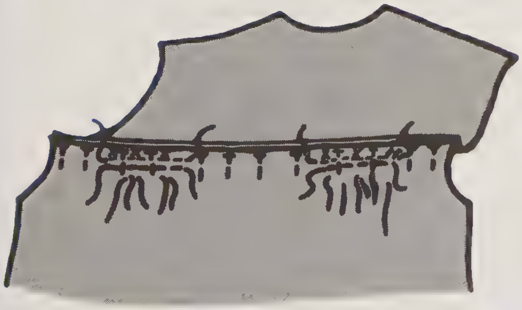
Helps for Success

Yokes are used in many garments. Often, the garment piece below the yoke is eased or gathered to add fullness. There are many types of yokes and methods of constructing them. Follow your pattern instruction sheet and the helps given below.

Marking Symbols

If your garment is designed with gathers or tucks, begin by marking the pattern symbols that will tell you where to place them.

Gathering



Follow the recommended procedure for gathering. Be sure to use two rows of basting. Place one row ½ inch from the fabric edge and another row ¾ inch from the edge. Do not backstitch. Adjust gathers evenly by pulling on both top threads at one time. Pin and stitch the seam. Finish the seam edges if needed. Press seam toward the yoke.

Topstitching the Yoke

You may choose to topstitch the yoke seam. For help, see Lesson 21, "Topstitching."

Name ____________________

Date ____________ Period ________

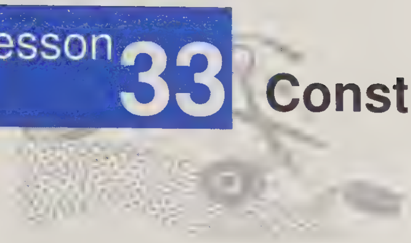
Evaluation Criteria: Yoke

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
An approved procedure was followed.				
Pieces are cut on the straight of grain.				
Gathering or easing is evenly distributed.				
Seams are ⅝ inch.				
Corners, if any, are square.				
Topstitching, if any, is an even distance from edge.				
Seams are finished appropriately for the fabric.				
Threads are clipped.				
Shows evidence of having been pressed as sewn.				
Fits body properly.				

Lesson 33

Constructing Collars



Objectives

This lesson will help you construct a collar. You will apply the following, previously acquired skills:

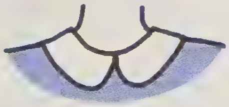
Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 14: Seams
Lesson 15: Clipping, Notching, Trimming, and Grading
Lesson 16: Seam Finishes
Lesson 18: Understitching
Lesson 20: Interfacing
Lesson 21: Topstitching

Helps for Success

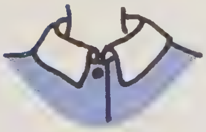
Constructing a collar requires several steps. With careful attention to detail, however, you can construct a comfortable, attractive collar for your garment. The guidelines below will help you.

Types of Collars

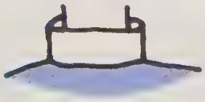
Collars come in a variety of styles, shapes, and sizes. However, you can classify most collars as flat, rolled, or standing. *Flat collars* lie flat against the garment. Peter Pan and sailor collars are examples of flat collars. *Rolled collars* stand up from the neck slightly and fold over to form a roll around the neck. Button-down collars are rolled collars. The *standing collar* stands up from the neck edge of the garment. Mandarin collars and turtlenecks are standing collars.



flat collar



rolled collar



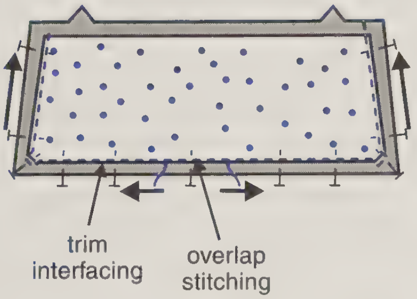
standing collar

Constructing the Collar

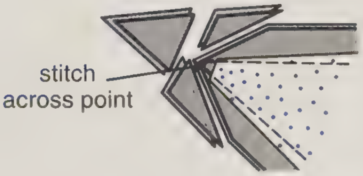
Collars are made up of two layers: the *collar*, which is the top layer, and the *undercollar*, which is the bottom layer. The undercollar piece is often a bit smaller than the collar piece. This helps keep the seamline on the finished collar out of sight by pulling it toward the undercollar.

You will generally sew a collar together before attaching it to a garment. To construct a collar, follow these steps:

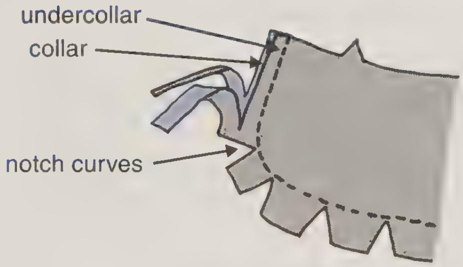
1. Interface the collar as directed by your pattern. See Lesson 20, "Interfacing." To reduce bulk in the corners of the collar, trim the corners of the interfacing before applying it. Trim seam allowances of sew-in interfacing after stitching it to the wrong side of the collar. Trim seam allowances of fusible interfacing before fusing it in place.
2. Pin right sides of the collar and undercollar together. Beginning at the center of the long, unnotched edge of the collar, machine stitch a ⅝-inch seam. Stitch to the point, pivot, and stitch to the notched edge of the collar. Overlap stitching and stitch the other half of the collar in the same manner. Using this type of directional stitching will help keep the collar pieces from shifting and stretching.



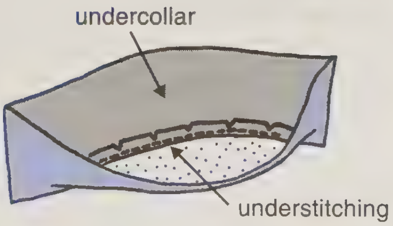
For pointed collars, sew one or two stitches across each point. These stitches provide room for the excess fabric that will be in the point when you turn the collar.

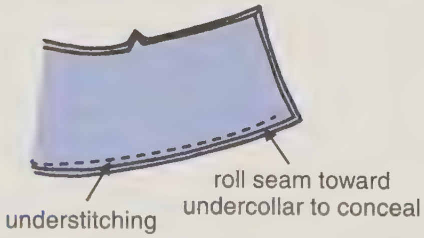


3. Reduce bulk in the seams by grading the seam allowances. Make the seam allowance for the undercollar narrower than the seam allowance for the collar. Trim corners as shown. Notch outside curves on rounded collars. Press seams open. Turn collar to the outside. Push points out. Press.



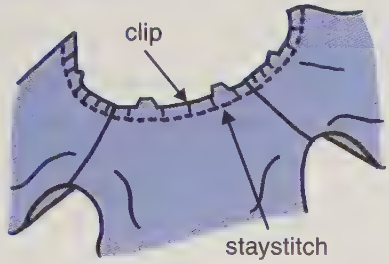
4. Understitch the seam allowances to the undercollar. This will prevent the undercollar from rolling to the outside. As you understitch, you will find that you are unable to stitch to the points of the collar. Begin and end stitching approximately ½ inch from the points. Be sure to secure the stitching at the beginning and ending of the stitching row. Press, rolling the seam edge under slightly. This will keep the seam from being visible when you attach the collar to the garment.





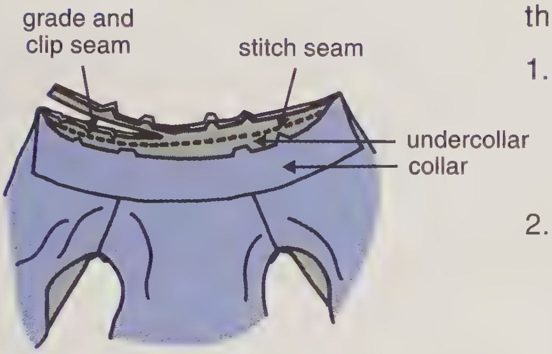
(Continued)

Attaching the Collar to the Garment



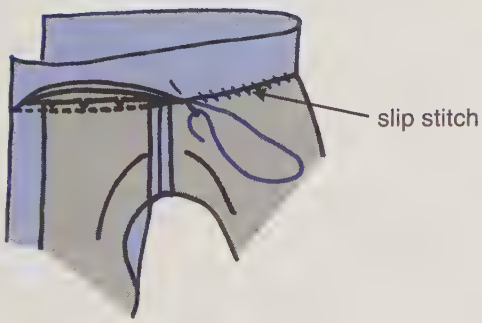
Different styles of collars vary in how they are attached to a garment. Some collars are attached with a neck facing; others are not. Check your instruction sheet to determine the method required for your garment.

Before attaching a collar, you need to staystitch the neckline of the garment to prevent stretching. Then clip to the staystitching. This will allow you to ease the collar to the smaller curve of the neckline.



Attaching a collar without a facing. A standing collar is usually attached without a facing. The following steps will help you attach this type of collar:

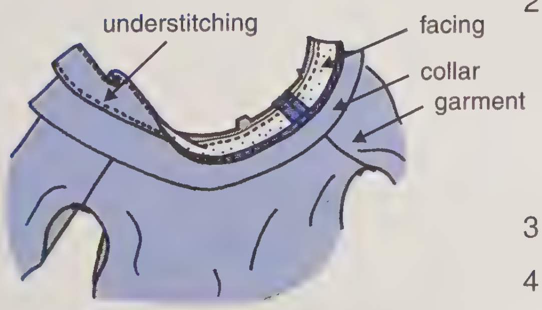
1. With right sides together, pin the undercollar to the garment neck edge, easing the undercollar to fit. Be sure to match notches and other symbols. Do not catch the collar in the pins.
2. Machine stitch the neckline seam, being careful not to catch the collar in the stitching. Grade the seam allowances and trim corners. Clip curves. Press seam allowances toward collar.
3. Press under the seam allowance on the collar and trim to ¼ inch.
4. Pin the folded edge of the collar over the neckline seam. Slip stitch the folded edge in place. Remove pins. Press finished collar.



These steps are somewhat different for attaching a standing collar with a separate neck band. Read your pattern instruction sheet carefully.

Attaching a collar with a full facing. The neckline seam allowances of a collar attached with a fitted facing are hidden by the facing. The following steps will help you attach this type of collar:

1. Interface, assemble, and clean finish the neckline facing.
2. Place the right side of the undercollar against the right side of the garment. Pin and baste both layers of the collar to the garment, matching symbols and notches. Pin the facing on top of the collar, right sides together.
3. Stitch the neckline seam through all layers.
4. Grade and clip seam allowances. Press seam allowances toward the facing.

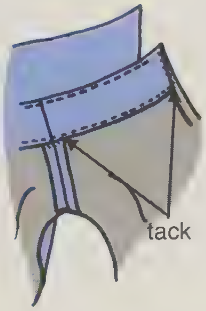


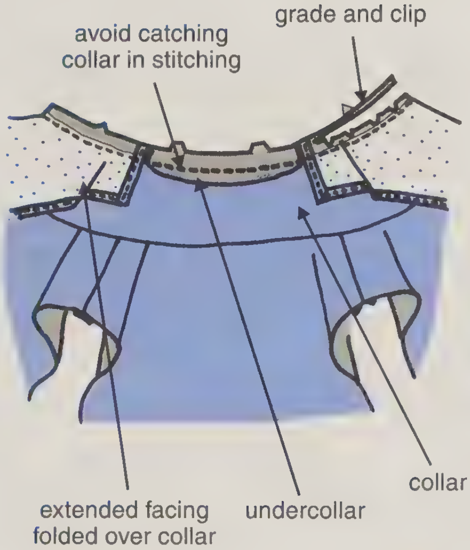
(Continued)

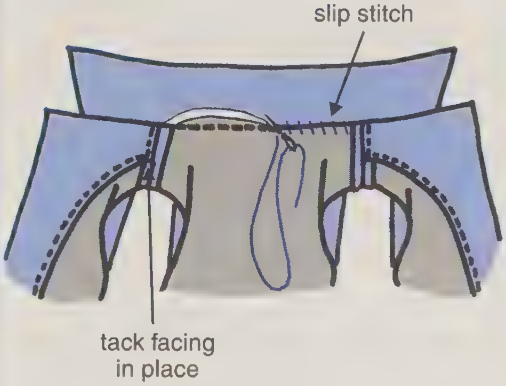
5. Understitch the facing to the seam allowances.
6. Turn the facing to the inside of the garment and tack in place. (For a review of how to attach a facing to a garment, see Lesson 31, "Constructing Facings.")

Attaching a collar with a partial facing. Attaching a collar to a garment with an extended facing combines steps from the two preceding procedures. The following steps will help you attach this type of collar:

1. Prepare the collar and extended facings following your pattern instructions.
2. Place the right side of the undercollar against the right side of the garment. Be sure to match symbols and notches. Pin and baste both layers of the collar to the garment from the front opening to the shoulder seam. Do this on both sides of the front opening. Pin and baste only the undercollar layer to the back of the garment between the shoulder seams.
3. Fold the extended facings back over the collar, as shown. Pin in place.
4. Stitch the collar in place, as shown. Be careful not to catch the collar in the stitching between the shoulder seams.
5. Grade seam allowances, trim corners, and clip curves. Press seam allowances.
6. Turn the facings to the inside of the garment.
7. Press under the seam allowance of the collar between the shoulder seams. Trim to ¼ inch. Pin the folded edge of the collar over the neckline seam. (The seam allowances will be inside the collar.) Slip stitch in place. Remove pins. Press.
8. Tack facings in place and press.




avoid catching collar in stitching
grade and clip
collar
extended facing folded over collar
undercollar



Name ______________________________

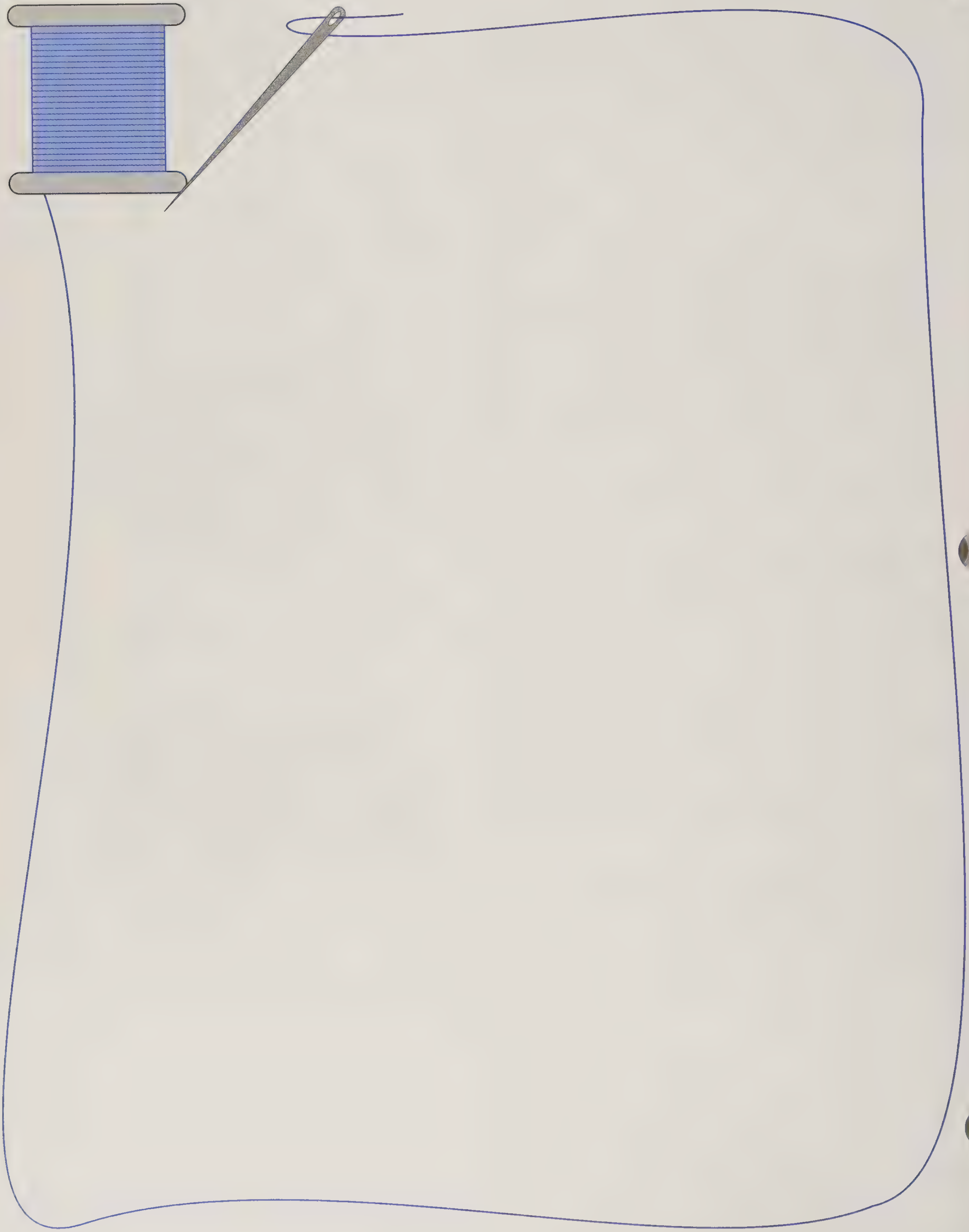
Date ____________________ Period ____________

Evaluation Criteria: Collar

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
An approved procedure was followed.				
Pieces are cut on the straight of grain.				
Interfacing is used to give desired shaping.				
Directional stitching was used to construct the collar.				
Collar seams were graded, corners were trimmed, and curves were clipped to reduce bulk.				
Seam allowances were understitched to the undercollar.				
Seam edge of collar is rolled slightly toward the undercollar, making the seam invisible on the finished garment.				
Topstitching, if any, is an even distance from the edge.				
Collar is uniform in shape.				
Collar does not extend beyond edge of neck seam (centered on neck).				
Neck seam is graded and clipped so that it will lie flat.				
There are no tucks in neck seam.				
Seam allowances were understitched to facing, where appropriate.				
Hand stitching is neat.				
Threads are clipped.				
Shows evidence of having been pressed as sewn.				

notes



Lesson 34 Constructing Lapels

Objectives

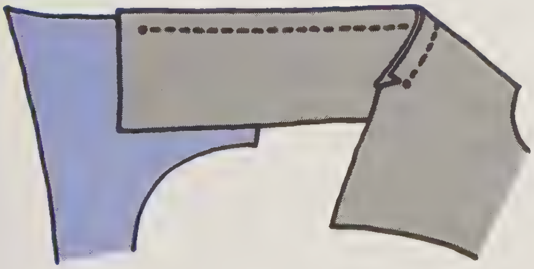
This lesson will help you to construct lapels. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 13: Staystitching
Lesson 14: Seams
Lesson 15: Clipping, Notching, Trimming, and Grading
Lesson 16: Seam Finishes
Lesson 17: Clean Finishing
Lesson 20: Interfacing
Lesson 21: Topstitching

Helps for Success

Constructing lapels requires precise marking, pinning, and stitching. Care must be taken to produce a lapel that lies flat without bulges or puckers. Follow your pattern instruction sheet carefully. The following guidelines will also help.

Sewing the Lapel and Collar Seam

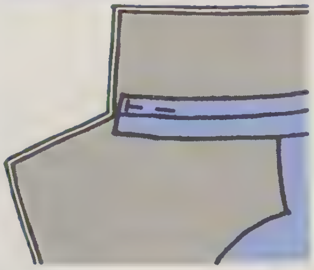


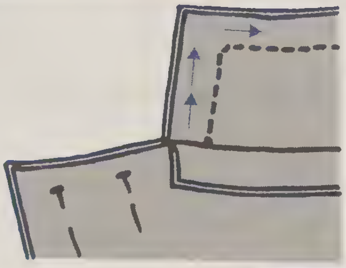
Sewing the lapel and collar seam can be one of the most difficult tasks you will encounter.

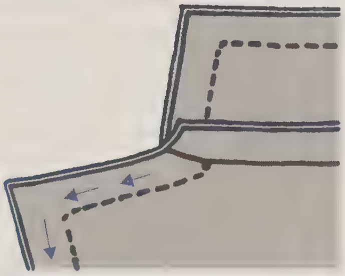
However, following the procedure given below will make it much easier.

1. Mark the dots on the collar, undercollar, lapel facing, and lapel with precision.
2. Pin the collar to the lapel facing. Match the dots carefully.
3. Sew between the dots. This means that there will be ⅝ inch on each end of the collar that is not stitched down. Do the same with the undercollar and lapel.
4. Clip to the dots on the lapel and lapel facing.

(Continued)

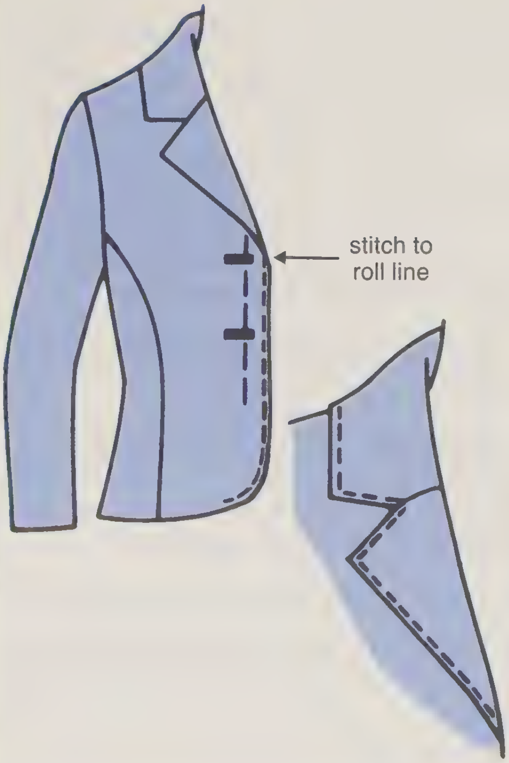






5. Pin the collar and lapel to the undercollar and lapel facing. Accuracy is very important. Place a pin close to the dot. Carefully line up the two seams These two seams must be matched exactly. Do not remove this pin until after you have stitched the lapel and collar seam.
6. Fold down the neckline seam on both sides of your work. Begin stitching from the dot (be exact) and stitch in the direction shown.
7. Fold up the neckline seam on both sides of your work. Begin stitching from the dot (be exact) and stitch in the direction shown.
8. Check your accuracy by looking at the right side of your work. Make sure the lapel seams are lined up. (The lapels may not lie perfectly flat at this point.)
9. Grade and clip the lapel and collar seams. Turn the collar and lapels to right side and press.

Topstitching Lapels



Lapels and collar edges may be topstitched, if desired. Topstitching can help give the garment a more tailored appearance. When topstitching, remember that the exposed side of the garment changes because the collar and lapels are rolled. Follow these steps:

1. Begin topstitching from the bottom of the garment on the right side. Stitch to the roll line, as shown. Remove the garment from the machine. Do not backstitch. To secure, pull the top thread through to the facing side, knot threads, and clip.
2. Resume topstitching from the facing side of the garment. Be careful to align with the first stitching.
3. At the notch where the lapel and collar meet, pivot and stitch as shown.
4. Continue to stitch along the collar and lapel to the other roll line. Change sides as before. However, pull the bottom thread through to the facing side to knot.

Name ______________________________

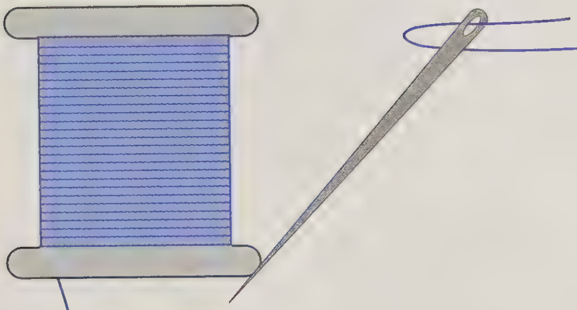
Date ____________________ Period ____________

Evaluation Criteria: Lapels

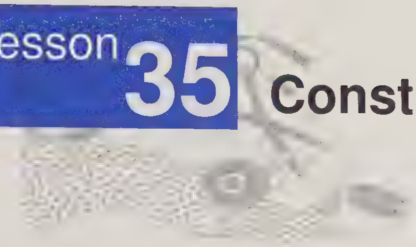
Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
An approved procedure was followed.				
Pieces are cut on the straight of grain.				
Lapel seam is matched accurately.				
Lapel is uniform in shape and rolls smoothly.				
Seams are graded and clipped where necessary.				
Interfacing is used to achieve appropriate shaping.				
Threads are clipped.				
Shows evidence of having been pressed as sewn.				
Edge of facing is finished appropriately for fabric.				
Topstitching, if any, is an even distance from edge and neat.				

notes



Lesson 35 Constructing Sleeves



Objectives

This lesson will help you construct a sleeve. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 14: Seams
Lesson 15: Clipping, Notching, Trimming, and Grading
Lesson 16: Seam Finishes
Lesson 19: Easing and Gathering
Lesson 24: Constructing Darts, Tucks, and Pleats

Helps for Success

There are various types of sleeves and methods of construction. Read your pattern instruction sheet carefully to find out how you should proceed. The following guidelines will also help.

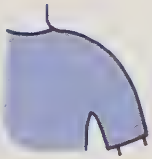
Types of Sleeves

There are many different styles of sleeves. They vary greatly in design, fullness, length, and construction. However, most sleeves are a variation of one of the following three types:

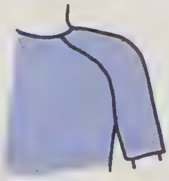
A *kimono sleeve* is cut in one piece with the front and back of the garment.

A *raglan sleeve* is attached to the garment by diagonal seams that extend from the underarm to the neckline. Shoulder shape may be created by a curved seam or dart at the top of the shoulder.

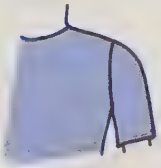
The *set-in sleeve* is the most common type of sleeve. It is attached to the garment by a seam that goes around the armhole. The sleeve is larger than the armhole and must be eased to fit. The extra fabric in the sleeve allows the arm to move freely.



kimono

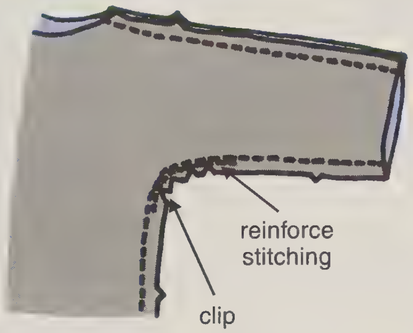


raglan



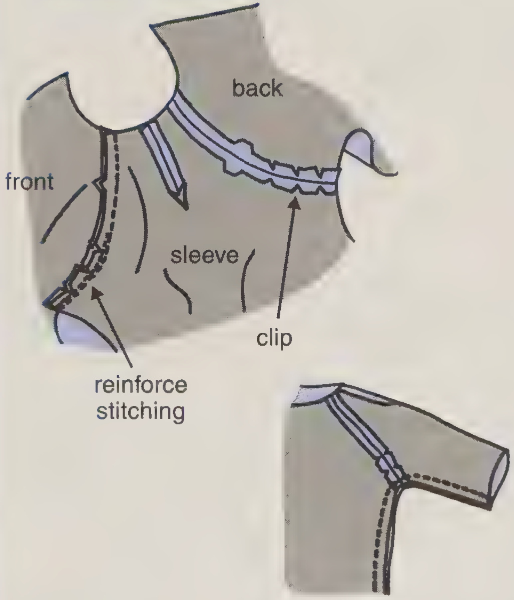
set-in

Constructing Kimono Sleeves



The kimono sleeve is perhaps the easiest of all sleeves to construct. Simply pin the garment front and back together at the side and underarm seams. Also pin from the top of the shoulder to the bottom of the sleeve. Be sure to match notches and symbols. Stitch from the bottom edge of the garment, being careful not to stretch the fabric. Reinforce the underarm curve by stitching again close to the first row of stitching in the seam allowance. You can also reinforce the seam with seam binding or twill tape as described in Lesson 25, "Constructing Seams." Clip the underarm curved part of the seam allowance. Press seams open.

Constructing Raglan Sleeves



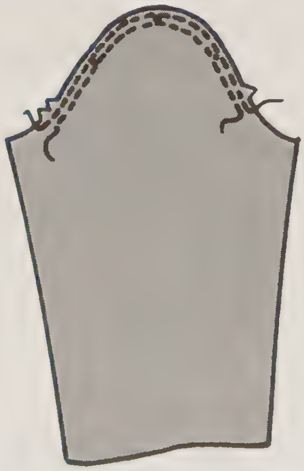
To construct a raglan sleeve, begin by stitching the shoulder dart or seam. Slit the dart to 1 inch from the point. Press the dart or shoulder seam open.

With right sides together, pin the sleeve to the front and back garment pieces along the diagonal seams, matching notches. Stitch the seams. Reinforce the curved section of the seams by stitching close to the first row of stitching in the seam allowance. Clip the curves. Press seams open.

Pin the front and back garment pieces together at the side and underarm seams, matching diagonal seams and notches. Stitch. Press seams open.

Sometimes the shoulder and underarm seams of raglan sleeves are stitched first; then the diagonal seams are stitched. Follow your instruction sheet for this construction method.

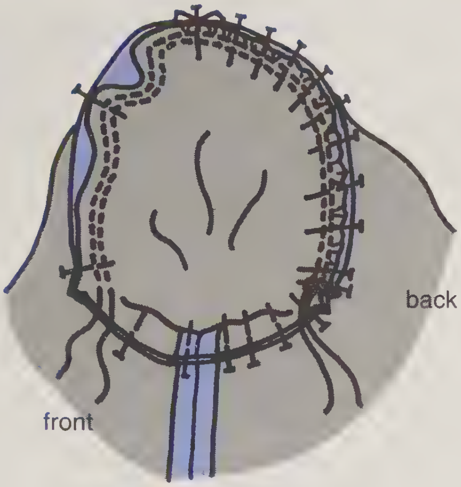
Constructing Set-In Sleeves



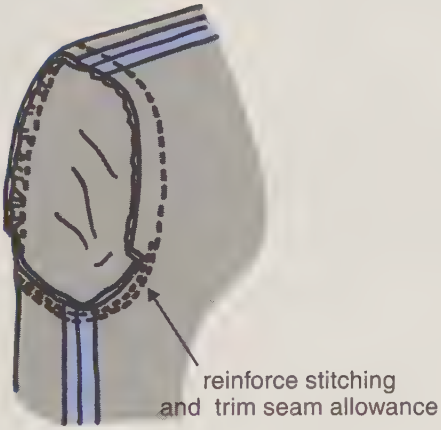
Set-in sleeves require more sewing skill than the other two types of sleeves. However, the following steps can help you construct set-in sleeves with ease:

1. Stitch two rows of gathering stitches around the sleeve cap between the notches on the sleeve. Place one row of gathering stitches ½ inch from the edge; place the other row ¾ inch from the edge. Adjust the gathers so that fullness is distributed evenly around the cap of the sleeve between the notches.
2. Stitch the underarm seam of the sleeve and press the seam allowances open.
3. Finish the lower edge of the sleeve as directed by your pattern instruction sheet.

(Continued)



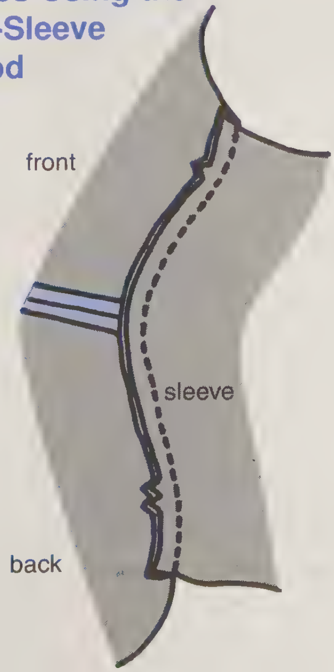
4. Turn the sleeve right side out and the garment wrong side out. Slip the sleeve into the armhole. (The sleeve and garment will have right sides together.) Sleeves are not interchangeable. Therefore, match notches carefully to be sure you have placed the sleeve in the correct armhole. The double notches on the sleeve will always be to the back of the garment. The single notches will be to the front. Match the underarm seam of the sleeve with the side seam of the garment. Match the large dot at the sleeve cap with the shoulder seam of the garment. Match remaining markings as you pin the sleeve in place. Arrange gathers evenly so the sleeve fits the armseye smoothly. Place pins about ½ inch apart to hold gathers in place.



5. With the sleeve side up, begin stitching a ⅝-inch seam at the underarm seam. Stitch around the sleeve, overlapping stitching at the underarm seam. Stitch carefully to avoid unwanted tucks. Your seam should be between the two rows of gathering stitches. Remove the gathering threads after stitching the seam.

6. Reinforce the underarm seam by sewing a second row of stitching next to the first row. Stitch in the seam allowance between the notches. Trim the seam allowance between the notches under the arm. Press the seam allowance.

Constructing Set-In Sleeves Using the Open-Sleeve Method



A second method for constructing set-in sleeves is the open-sleeve method. For this method, the armhole seam is stitched before the underarm seams of the garment or sleeve. Use this method only when there is a small amount of fullness in the sleeve cap.

1. If your instruction sheet directs you to do so, stitch rows of gathering stitches between the notches on the sleeve.

2. With right sides together, pin the sleeve to the garment armhole. Match symbols as described under the first construction method. Adjust gathering stitches, if necessary. With the sleeve up, stitch a ⅝-inch seam. Press seam allowance.

3. Pin the garment side seam and the underarm sleeve seam together, matching armhole seams and notches. Stitch. Press the seam open.

Name ______________________________

Date ____________________ Period ____________

Evaluation Criteria: Sleeves

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
An approved procedure was followed.				
Pieces are cut on the straight of grain.				
Tucks, if any, are uniform in size and evenly spaced.				
Darts, if any, are tapered to a fine point.				
Gathering or easing is evenly distributed with no large tucks.				
Seam edges and seam width are appropriate for garment and fabric.				
Sleeves are placed with notches and dots correctly matched.				
Hem, if any, is appropriately finished for fabric and garment design.				
Handstitching, if any, is uniform in size and shows as little as possible. Knots are hidden.				
Threads are clipped.				
Shows evidence of having been pressed as sewn.				
Fit is good—appropriate length, grainlines hang straight, seams correctly positioned for type of sleeve.				

Lesson 36

Constructing Sleeve Openings

Objectives

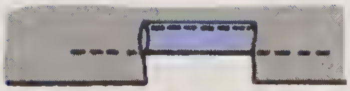
This lesson will help you construct a sleeve placket. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew

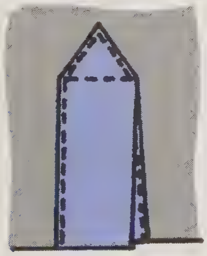
Helps for Success

Openings are needed on cuffed sleeves to make getting the sleeve over the hand possible. A number of methods can be used to finish openings. With some methods, a placket, or separate fabric extension, is used. Your pattern instruction sheet will give directions for your type of placket. The guidelines below will also help.

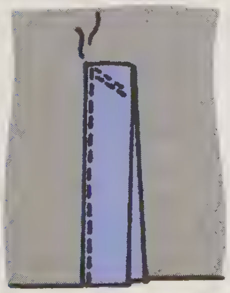
Types of Openings



There are three basic types of sleeve openings. A hemmed opening is the easiest sleeve opening to construct. If you use this type, be sure to use staystitching. This will reinforce clipping.

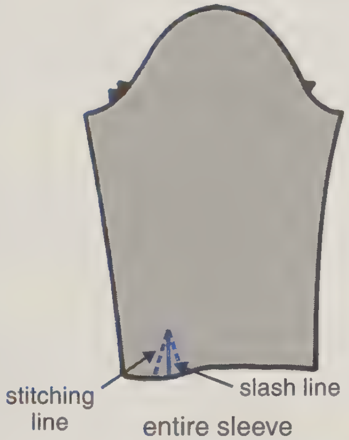


A shirt placket is the most difficult type of sleeve opening to construct. Follow your pattern Instruction sheet exactly. Use caution to be sure that you have lapped the sides correctly.



A continuous lap placket is the most common finish for sleeve openings. The next box describes how to construct this type of opening.

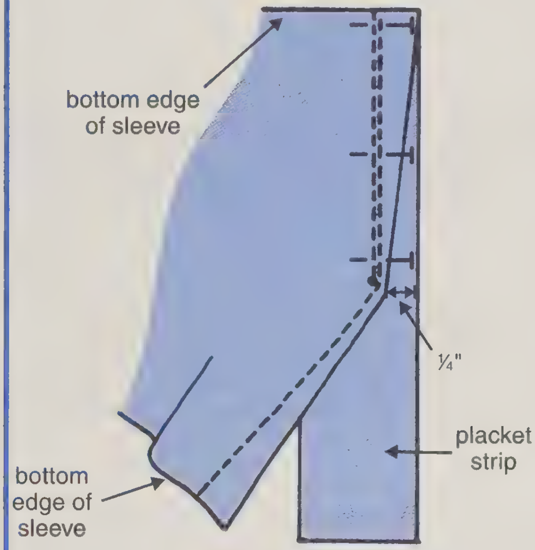
Constructing a Continuous Lap Placket


stitching line
slash line

entire sleeve

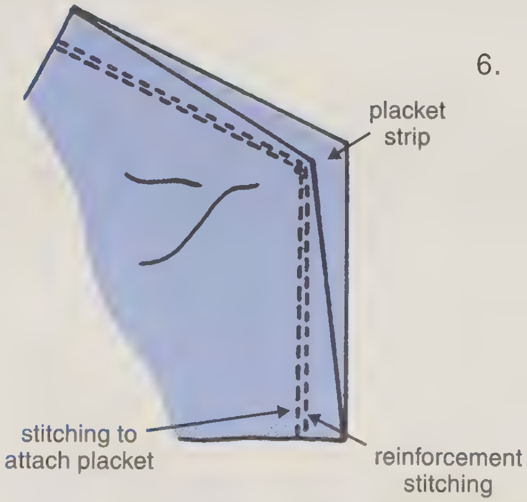
To construct a continuous lap placket, follow these steps:

1. Carefully mark the V-shaped placket placement marking in the correct location on the sleeve. Incorrect marking may cause the placket to appear on the front of the sleeve rather than on the back.
2. Stitch along the V using a small machine stitch for reinforcement. Slash up the center of the V to the point. Be careful not to cut your reinforcement stitching.


bottom edge of sleeve
¼"
placket strip
bottom edge of sleeve

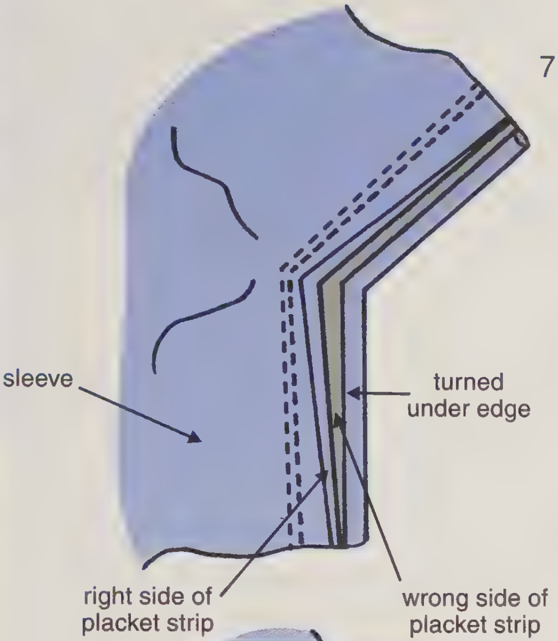
close-up of placket area

3. Cut placket strips according to pattern instructions.
4. Place the wrong side of the sleeve on top of the right side of the placket strip. The edge of the placket strip will be even with the bottom edge of the sleeve. The point of the V will be ¼ inch from the edge of the placket strip. Pin the two pieces together near the top and near the point of the V. Do not try to pin down the other side of the V.
5. Stitch along the reinforcement stitching line. Stitch to the point. Stop. Leave the needle in the fabric. Raise the presser foot and pivot the fabric.

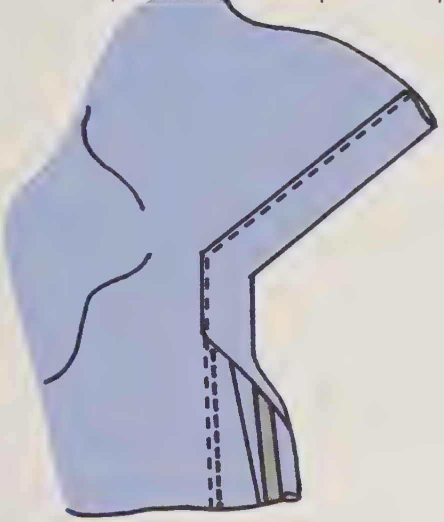

placket strip
stitching to attach placket
reinforcement stitching

6. Line up the remaining side of the placket as shown. Continue stitching along the reinforcement stitching line.

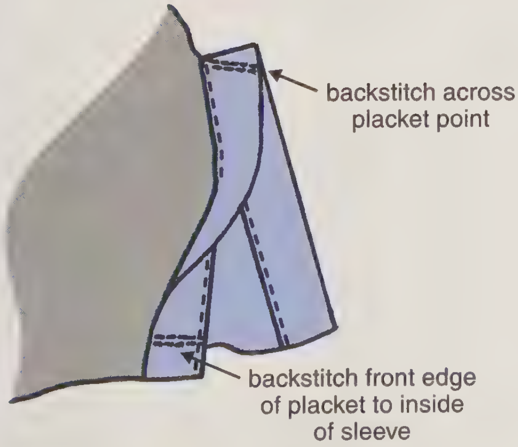
(Continued)


sleeve
turned under edge
right side of placket strip
wrong side of placket strip

7. Open out the placket strip. Press the seam allowance toward the placket strip. Also, press under ¼ inch along the edge of the placket strip.



8. Fold the placket strip again, placing the folded edge just over the stitching line. Edge stitch the placket strip in place. Pivot at the point of the V, as before.


backstitch across placket point
backstitch front edge of placket to inside of sleeve

9. On the inside of the garment, backstitch across the placket point, as shown.

10. Turn the front edge of the placket to the inside of the sleeve and backstitch in place, as shown.

Name ______________________

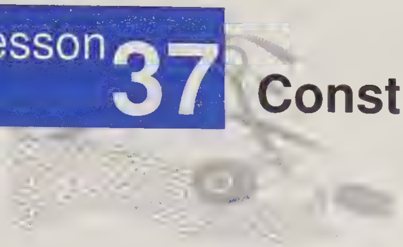
Date ______________ Period ________

Evaluation Criteria: Sleeve Placket

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
An approved procedure was followed.				
Stitching is used to reinforce stress points.				
There are no puckers.				
Placket is the same width the whole length.				
Placket is securely stitched.				
Threads are clipped.				
Shows evidence of having been pressed as sewn.				
Placket laps in the correct direction.				
Placket point and lap are tacked in place.				

Lesson 37 Constructing Cuffs



Objectives

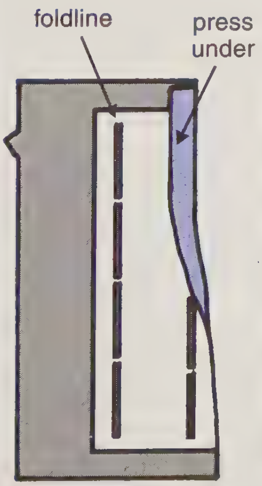
This lesson will help you construct a cuff. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 14: Seams
Lesson 15: Clipping, Notching, Trimming, and Grading
Lesson 16: Seam Finishes
Lesson 19: Easing and Gathering
Lesson 20: Interfacing
Lesson 21: Topstitching
Lesson 22: Hand Stitching
Lesson 24: Constructing Darts, Tucks, and Pleats

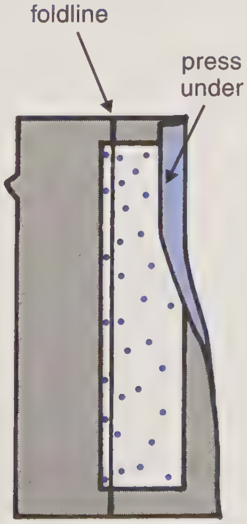
Helps for Success

There are a great variety of cuff designs and methods of application. Follow your pattern instruction sheet. Also read the helps that follow.

Interfacing the Cuff



precut perforated interfacing



interfacing cut from pattern piece

In most instances, you will need to interface the cuff. This provides the needed shaping and body. To apply the interfacing, follow your pattern instructions. If you need to, review Lesson 20, "Interfacing."

If the cuff piece is turned in half to achieve the finished cuff, follow these steps.

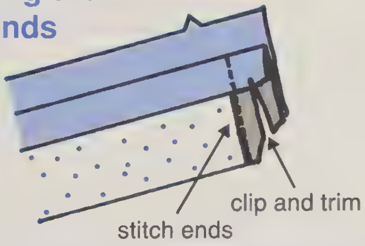
1. Cut interfacing to half the width of the cuff pattern plus ¼ inch. You can also use precut interfacing strips with perforated foldlines and stitching lines.
2. If using precut interfacing, cut a strip the length of the cuff minus seam allowances at each end. If using traditional interfacing, trim the excess from the seam allowances on the ends and one long edge.
3. Position the interfacing on the wrong side of the cuff piece. If using precut interfacing, position a

(Continued)

row of perforations over the foldline. If using traditional interfacing, extend the interfacing ¼ inch over the cuff foldline. Extending the inter-facing over the foldline will give a soft, professional look to the cuff.

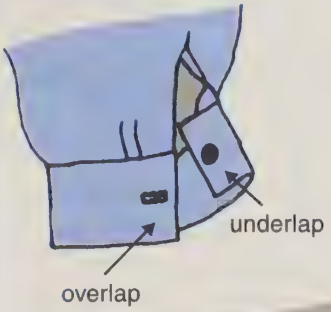
4. Fuse or sew the interfacing in place. (See Lesson 20, "Interfacing," for information on applying interfacing.)
5. Press the seam allowance under on the long unnotched edge of the cuff.

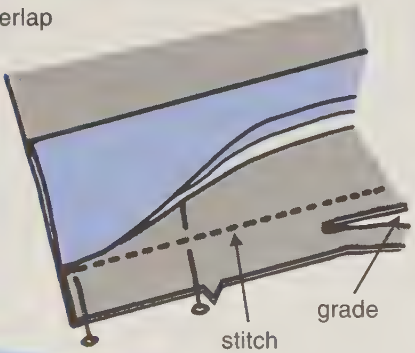
Stitching the Cuff Ends

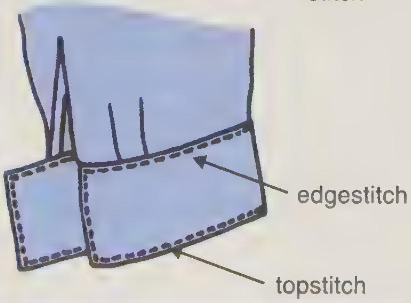


Fold the cuff along the foldline, right sides together, as shown. Stitch across both ends of the cuff. Clip corners and trim seams. Turn the cuff right side out. Press.

Attaching the Cuff to the Sleeve





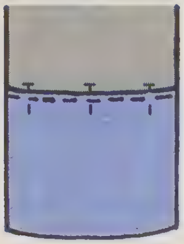


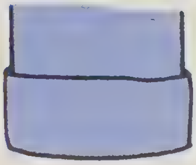
As you attach the cuff to the sleeve, match notches carefully to make sure the cuff laps correctly. When the garment is on the body, the buttonhole will be on the front cuff edge. It will lap over the back edge of the cuff.

The following steps will help you attach the cuff to the sleeve:

1. Pin the noninterfaced side of the cuff to the wrong side of the sleeve, matching notches.
2. With cuff side up, stitch a ⅝-inch seam. Do not catch the top layer of the cuff in the seam. Trim and grade the seam allowances.
3. Fold the cuff down, pressing the seam allowances toward the cuff. From the outside, carefully pin the folded edge of the cuff over the seam. Edgestitch along the cuff seam. Topstitch around the cuff ¼ inch from the edge. (If you prefer a cuff without topstitching, slip stitch the folded edge of the cuff over the seam.)

Rolled Cuffs





Rolled cuffs do not always need a hand sewn hem. The following steps will help you save time constructing rolled cuffs.

1. Pin the hem in place. Try on the garment to check hem length.
2. Finish hem edge using a technique that is appropriate for the weight of your fabric. (See Lesson 23, "Hemming Methods.") Generally, the hem edge may be turned under ¼ inch.
3. Machine stitch the hem to the garment. Stitch close to the turned edge of the hem.
4. Turn up the cuff on the outside of the garment. The cuff will cover the row of machine stitching.
5. You may wish to tack the cuff in several locations to keep it in place. Be careful that your tacking stitches are not visible on the outside of the garment.

Name ____________________

Date ____________ Period ________

Evaluation Criteria: Cuffs

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
An approved procedure was followed.				
Pieces are cut on the straight of grain.				
Interfacing is used to provide the desired shaping.				
Cuff is correctly positioned on the sleeve according to pattern symbols.				
Topstitching, if any, is an even distance from edge.				
Cuff is uniform width, and all corners are square and sharp.				
Handstitching is uniform in size and shows as little as possible. Knots do not show.				
Seams are graded to eliminate bulk.				
Threads are clipped.				
Shows evidence of having been pressed as sewn.				

Lesson 38

Constructing Shoulder Pads

Objectives

This lesson will help you construct shoulder pads. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 20: Interfacing
Lesson 22: Hand Stitching

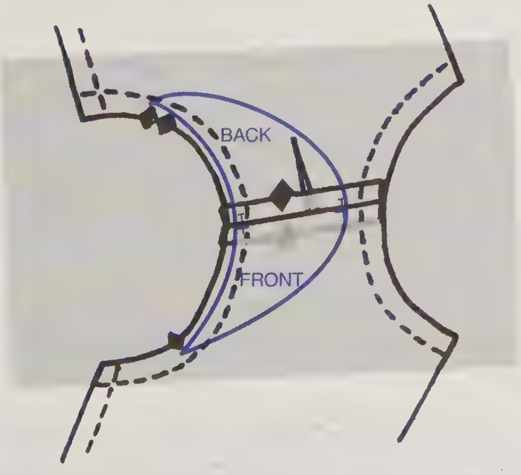
Helps for Success

The importance of shoulder pads changes with the season and with current fashion trends. They may be used to achieve a more pronounced shoulder line. They may also be used to make a garment fit correctly.

To improve garment fit, shoulder pads may be used to conceal uneven or sloping shoulders. To decide whether shoulder pads should be used, try on the garment and check for the desired fit through the shoulder and sleeve area.

Shoulder pads may be purchased in varying sizes and shapes at most sewing centers. Making your own is also quite easy.

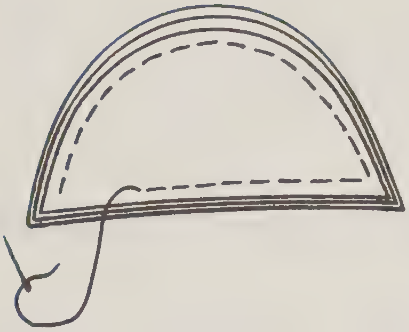
How to Make Shoulder Pads



To make shoulder pads, follow these steps:

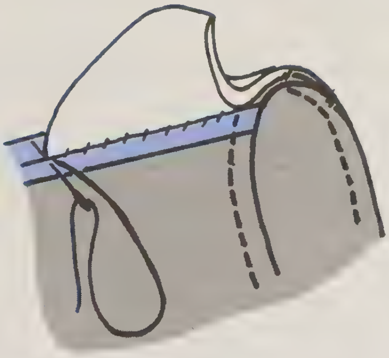
1. Begin by making a shoulder pad pattern. Take the front and back pattern pieces of your garment and pin in any darts or tucks located in the shoulder area. Then overlap the shoulder seams and pin the two pattern pieces together.
2. Lay a piece of tissue paper over the shoulder area of the two pattern pieces. Trace along the cutting line between the armhole notches. Then draw a curved line from the notches to within 1 inch of the neckline seam.
3. Mark the front and back of your new pattern. Also, mark the location of the shoulder seam at both edges.

(Continued)



4. Using your pattern, cut two or three layers of polyester fleece for each shoulder pad, depending on desired thickness. Grade each layer along the curved edge. Sew the layers together by hand.
5. Add ⅝ inch all the way around your shoulder pad pattern for a seam allowance. Use this enlarged pattern to cut two pieces of lining or lightweight fashion fabric to make a cover for each shoulder pad. Transfer shoulder seam markings to the fabric.
6. With right sides together, stitch shoulder pad cover pieces, leaving an opening to turn the cover inside out. Trim seam allowance. Clip inside curve and notch outside curve. Press. Turn and place fleece layers inside. Hand stitch the opening closed.

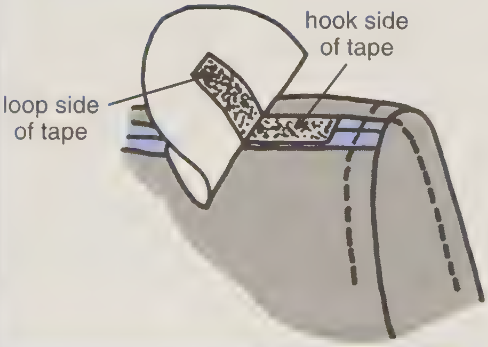
Attaching Permanent Shoulder Pads



For many types of garments, such as lined jackets, you will want to permanently hand stitch shoulder pads in place. Attach the shoulder pads before inserting the lining. Follow these steps:

1. Position the shoulder pad, matching the shoulder seam markings on the pad with the shoulder seam. The armhole edge of the pad should extend ½ inch beyond the armhole seam.
2. Pin in place. Try on the garment to be sure the fit is as desired.
3. Loosely hand stitch the pad in place along the shoulder seam and armhole seam.

Attaching Removable Shoulder Pads



For some garments, you may prefer to make the shoulder pads removable. Hook and loop tape is excellent for this purpose. Follow these steps:

1. On the inside of the garment, hand stitch the hook side of the tape to the garment shoulder seam.
2. Try on the garment and position the shoulder pad as desired. Pin in place. Remove the garment. Mark the position of the loop side of the tape. Stitch in place on the top side of the shoulder pad.

Name ______________________________

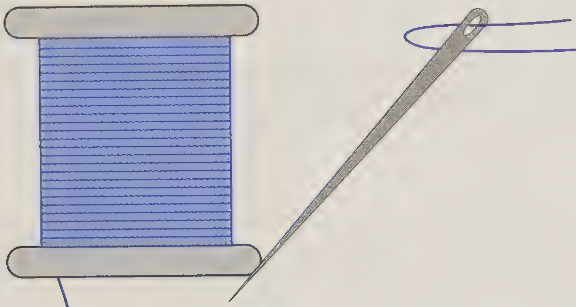
Date ____________________ Period ____________

Evaluation Criteria: Shoulder Pads

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
Pads are appropriately shaped.				
Layers of fleece are graded.				
Pads are securely tacked to the garment.				
Pads are positioned according to the instruction sheet and for the best fit.				
Hand stitching is uniform in size and shows as little as possible. Knots are hidden.				
Pads improve fit and appearance of garment.				

notes



Lesson 39 Constructing Waistbands

Objectives

This lesson will help you construct a waistband. You will apply the following, previously acquired skills:

- Lesson 5: Reading the Instruction Sheet
- Lesson 6: Pattern Symbols
- Lesson 11: Operating the Sewing Machine
- Lesson 12: Pressing As You Sew
- Lesson 14: Seams
- Lesson 15: Clipping, Notching, Trimming, and Grading
- Lesson 16: Seam Finishes
- Lesson 20: Interfacing
- Lesson 21: Topstitching
- Lesson 22: Hand Stitching

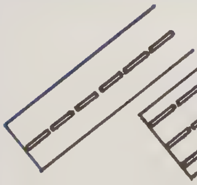
Helps for Success

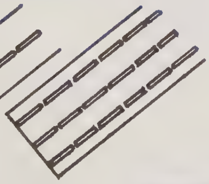
There are various methods for applying a waistband. Follow your pattern instruction sheet carefully. As you learn the various application methods, you will find that you have a preference for a certain method. You may then begin to adjust your pattern instructions to use the method you prefer.

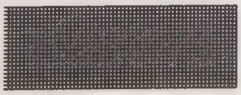
Preparing the Garment Waistline

Staystitch the garment waistline to prevent stretching during fitting and construction of the waistband. Make sure any gathers, pleats, or tucks are evenly distributed and basted in place. Try on the garment and make any needed fitting adjustments before attaching the waistband.

Types of Waistband Interfacings


single slot


triple slot

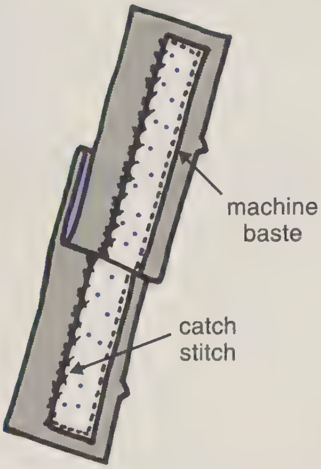

woven interfacing strip

Interfacing prevents the waistband from stretching and rolling. You can buy fusible or sew-in interfacing by the yard and cut it to the desired length and width. You can also buy pre-cut nonwoven fusible interfacing, which is slotted to mark stitching and folding lines. Another type of interfacing is a woven interfacing strip, which produces a very firm, stable waistband. It is too stiff for sewing in seams but can be sewn to the waistband facing.

Applying the Interfacing to the Waistband

The technique used to apply the interfacing to the waistband will depend on the type of interfacing being used. When applying precut nonwoven fusible interfacing or woven strip interfacing, follow the manufacturer's directions. The following steps will help you apply sew-in interfacing:

1. Locate the center foldline of the waistband by pressing the waistband in half lengthwise.
2. Cut the interfacing ¼ inch wider than half the width of the waistband.
3. Pin and machine baste the interfacing to the wrong side of the waistband along the notched side and both ends. Trim the interfacing close to the machine stitching.
4. Using a catch stitch, hand sew the interfacing just above the fold crease. Stitches may be as large as ½ inch.

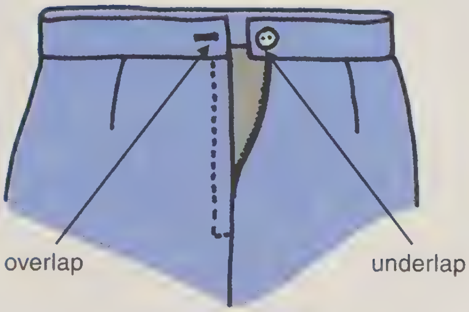


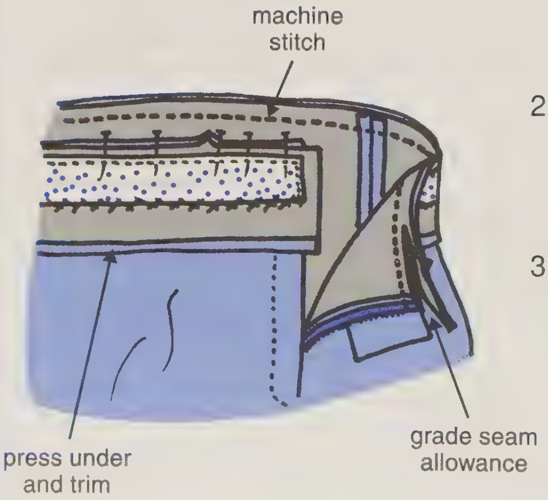
Attaching the Waistband to the Garment

The waistband generally extends beyond the garment edge to provide a lap for button and buttonhole placement. How the waistband laps will vary with the design of the garment. Check the instruction sheet and use pattern symbols to determine which way your waistband laps.

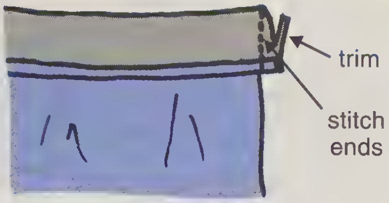
How the waistband is attached to the garment depends on garment design and the type of interfacing being used. Check your pattern instructions to help you determine the best method for your garment. The following steps will help you apply a traditional waistband.

1. Press under the seam allowance on the long, unnotched edge of the waistband. Trim pressed seam allowance to ⅜ inch.
2. With right sides together, pin the band to the waistline edge, matching notches, centers, and other markings. Ease to fit if necessary. Stitch in place.
3. Grade and clip the seam allowance. Press the seam allowance toward the waistband.

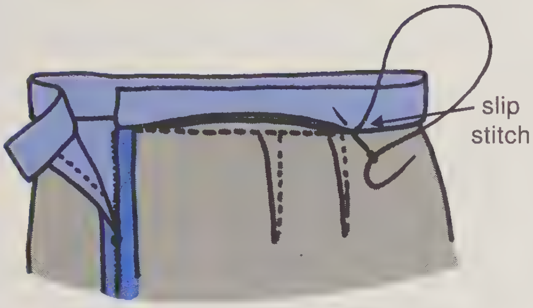




(Continued)



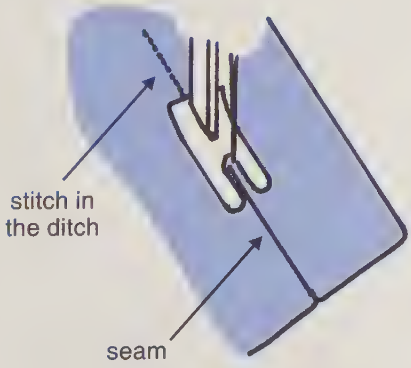
4. With right sides together, fold the waistband along the foldline. Stitch across the ends of the waistband as shown. Trim the corners and seam allowances.



5. Turn the waistband right side out. Press. Pin the waistband edge to the inside of the garment along the waistline seam. Using a slip stitch, hand stitch the waistband in place.

"Stitch in the ditch" is another technique for stitching the underside of the waistband in place. It eliminates the need to hand stitch. The following steps will help you use this technique:

1. Trim the seam allowance on the long, unnotched edge of the waistband to ⅜ inch. Zigzag or serge stitch to finish this seam allowance.
2. With right sides together, pin the band to the waistline edge, matching notches, centers, and other markings. Ease to fit if necessary. Stitch in place.
3. Grade the seam allowance. Press the seam allowance toward the waistband.
4. With right sides together, fold the waistband along the foldline. The edge you finished in step 1 should extend ⅜ inch below the waistline seam. Stitch across the ends of the waistband and along the band extension. Trim the corners and seam allowances.
5. Turn the waistband to the outside. Press. Pin in place. With right side up, stitch in the ditch formed by the waistline seam, catching the waistband on the underside. Be sure all layers of fabric are lying flat under the needle.



Name ______________________________

Date ____________________ Period ____________

Evaluation Criteria: Waistbands

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
An approved procedure was followed.				
Waistband is cut on the straight of grain.				
Band lies flat without wrinkling or buckling.				
Band is the same width the whole length.				
Corners are square and sharp.				
Seams are graded to eliminate bulk.				
Band ends overlap to allow for placement of fasteners.				
Band is interfaced to prevent rolling.				
Topstitching, if any, is an even distance from edge.				
Belt loops, if any, are evenly spaced.				
Band shows evidence of having been pressed as sewn.				
Threads are clipped.				
Hand stitching, if any, is uniform size and shows as little as possible. Knots do not show.				
Band fits waist.				

Lesson 40

Constructing Elastic Casings

Objectives

This lesson will help you construct an elastic casing. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 14: Seams
Lesson 16: Seam Finishes

Helps for Success

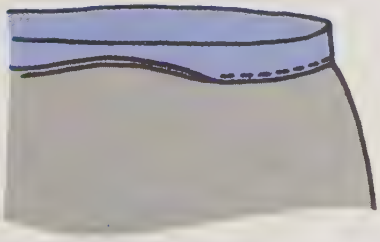
A casing is a fabric tube that holds elastic or a drawstring. Casings are often used on waistbands, cuffs, and leg openings of sportswear.

There are many types of casings and methods of construction. The method you select will depend on the garment design. Follow your pattern instruction sheet and use the helps that follow.

Width of Casing

The width of the casing should be slightly larger than the size of the elastic or drawstring. If the casing is too large, the elastic will roll and twist. If it is too small, you will not be able to insert the elastic in the casing. Check the pattern for the amount to turn under for the casing. Purchase the recommended width of elastic for your garment. Measure and press the casing into place before doing any stitching.

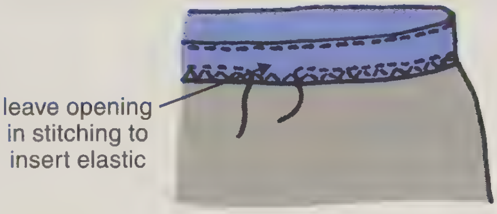
Finishing the Casing Edge



Finish the edge of the casing according to the weight of your fabric. Follow this guide:

Light- to medium-weight fabric. Turn under the edge (see pattern for amount) and press. Turn over the casing width required by the pattern. Pin and stitch close to the folded-under edge.

(Continued)


leave opening in stitching to insert elastic

Heavy to stiff fabrics. Serge stitch or zigzag the edge. Turn under width of casing required by the pattern. Stitch close to edge.

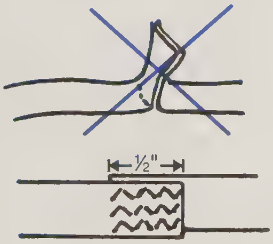
For both types of fabric, your pattern instructions may recommend stitching on the top edge of the casing as well.

Leave an opening in the bottom row of stitching so that the elastic may be inserted. After inserting the elastic, stitch the opening closed.

Determining Length of Elastic

Fit the elastic around the part of the body for which the casing is being made. Stretch the elastic slightly until it feels comfortable. Be careful not to make the elastic too tight. Add 1 inch to overlap ends of elastic later.

Sewing Ends of Elastic Together



Insert the elastic in the casing. Safety pins work well for this task. Attach a pin to each end of the elastic. Push one pin through the casing. Use the other pin to keep the other end of the elastic from slipping into the casing.

After the elastic is through the casing, overlap the ends ½ inch, as shown.

Zigzag or straight stitch several times across the ends of the elastic. Make sure the stitching is secure and will not pull out later.

Buttonholes for Drawstring Casings

Two buttonholes must be made to provide openings for drawstrings.

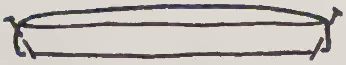
Your pattern will show the correct position of these buttonholes. Mark the location accurately.

Fuse or baste two small pieces of interfacing to the wrong side of the fabric where the buttonholes will be located. Do this before making the buttonholes to provide greater stability for the buttonhole.

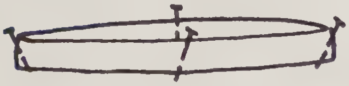
Casings for Knit Fabrics

An effective method of constructing a casing on knit fabric is to stitch the elastic to the garment. This will prevent the elastic from rolling and twisting during wearing. Follow these steps:

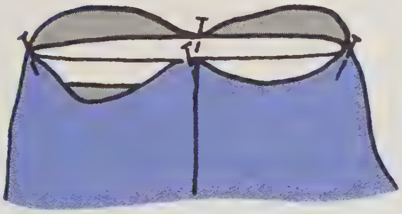
1. Measure the elastic to the correct length. Overlap ends and stitch securely.



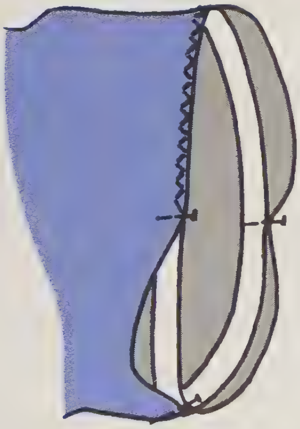
2. Fold the elastic in half. Place a pin at each end.



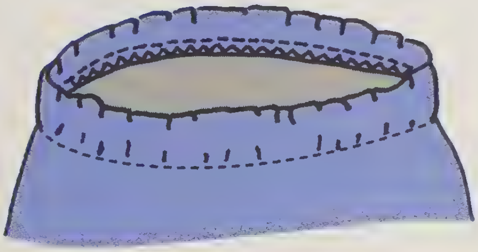
3. Fold the elastic in half again by placing the first two pins together. Place a pin at each end. You have now divided the elastic into four sections.



4. Pin the elastic to the wrong side of the garment with upper edges together. Match the pins inserted in the elastic in steps 2 and 3 with the center front, center back, and side seams.



5. Zigzag the elastic to the garment casing edge. Stretch the elastic to fit the garment as you sew.



6. Turn the elastic and casing to the inside. Stitch around the elastic, again stretching as you sew. You will be sewing through the casing edge, elastic, and garment.

Name ______________________________

Date ____________________ Period ____________

Evaluation Criteria: Elastic Casings

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
An approved procedure was followed.				
Casing is even in width.				
Elastic is not twisted inside casing.				
Stitching is straight and even.				
Elastic is correct length to fit body.				
Width of elastic is suitable for the design and purpose.				
Threads are clipped.				
Shows evidence of having been pressed as sewn.				
Edge of casing is finished appropriately for fabric.				

Lesson 41

Constructing Linings

Objectives

This lesson will help you construct a lining. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 13: Staystitching
Lesson 14: Seams
Lesson 15: Clipping, Notching, Trimming, and Grading
Lesson 16: Seam Finishes
Lesson 22: Hand Stitching
Lesson 23: Hemming Methods

Helps for Success

Linings are usually included in more advanced sewing projects. Suit jackets, coats, and some skirts and dresses may be lined.

Linings help give a garment an attractively finished interior. They also prevent pulling and sagging in the fashion fabric. Partial linings can be used in stress areas to prevent sagging. Skirt backs and pant knees are two places that may be partially lined for this reason.

Before you construct a lining, read your pattern instruction sheet and the helps that follow.

Stitching Lining Pieces Together

Stitch the lining together according to the pattern instruction sheet. Generally, the steps in sewing the lining pieces together will be similar to those followed to sew the body of the garment together.

The lining back will usually be larger than the garment back. A pleat is formed with the excess fabric in the lining back to provide ease for shoulder movement.

Fitting the Lining

A body form is handy for fitting the lining into the garment. The garment can be placed wrong side out on the form. Then the lining can be pinned in place.

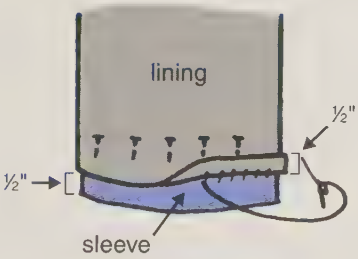
If a form is not available, lay the garment flat on a table with the right side down. With wrong sides together, fit the lining into the garment. Match up any seams, darts, etc., and pin these together. Smooth the lining with your hands. Make sure the lining is not too small for the garment. Pin in place, turning under the seam and hem allowances around the lining.

Slip on the garment to make sure the lining fits correctly. This is an important step.

Hand stitch around the lining, except the hem, using a stitch that will not be visible.

Hemming the Lining

Skirt, coat, and dress linings should not be attached to the garment at the hem. Hem these linings separately as you would hem any fabric of this weight. Also, always make the lining a little shorter than the garment. This way, the lining will not show when the garment is being worn.



Sleeve and jacket linings are attached to the garment at the hem. When constructing these hems, ease must be provided for body movement. To add ease, a tuck is sewn into the lining at the hem.

To form the tuck, pin the lining in place above the hemline. The edge of the hem should be ½ inch above the garment hem edge. Fold back the lining about ½ inch and stitch the lining to the garment. Be sure not to catch the top layer of lining. Turn the lining down again after stitching.

Name ____

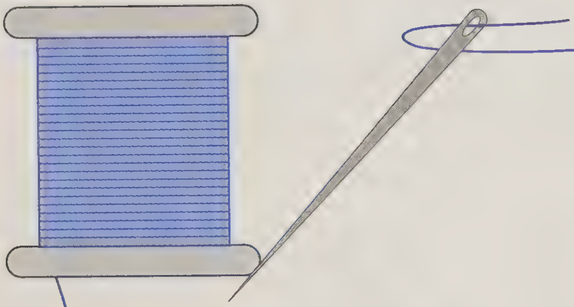
Date ______________________ Period _____________

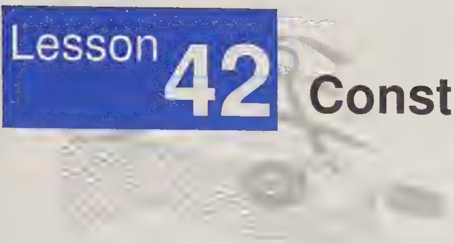
Evaluation Criteria: Lining

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
An approved procedure was followed.				
Lining fits the garment.				
Hand stitching is a uniform size and shows as little as possible. Knots are hidden.				
Bar tack, if any, is neatly sewn.				
Hem allows for body movement.				
Seams of lining are ⅝ inch.				
Lining seams are finished appropriately for fabric.				
Threads are clipped.				
Shows evidence of having been pressed as sewn.				
Lining is cut on the straight of grain.				

notes





Lesson 42 Constructing Hems

Objectives

This lesson will help you construct a hem. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 11: Operating the Sewing Machine
Lesson 12: Pressing As You Sew
Lesson 15: Clipping, Notching, Trimming, and Grading
Lesson 22: Hand Stitching
Lesson 23: Hemming Methods

Helps for Success

Several hemming techniques were explained in Lesson 23, "Hemming Methods." This lesson will help you mark and prepare a hem on a garment. It will also show you how to do two less frequently used hemming methods.

Marking the Hem

Before marking a garment hem, let the garment hang for 24 hours. This is especially important if the garment is made from knit fabric or has a bias or flared hem. This step helps account for natural stretch in the fabric grain. Skipping this step could result in a garment that stretches and hangs unevenly on the body after hemming.

When you are ready to mark the hem, try on the garment. Be sure to wear the type of undergarments and shoes you plan to wear with the garment. If the garment requires a belt, wear the belt. Stand in front of a full-length mirror and check to make sure the garment hangs properly on your body.

You will need to ask another person to help you mark a hem. While the hem is being marked, stand relaxed but with correct posture. Stand still and have the other person move around you, marking the hem with pins or chalk. He or she should use a pin marker or yardstick to carefully measure the distance between the floor and the hemline. This distance must be the same all the way around the garment. He or she should place

(Continued)

pins or chalk marks every 3 or 4 inches. After the other person has finished marking your hem, take a final look in the mirror. Make sure the hem markings are parallel to the floor.

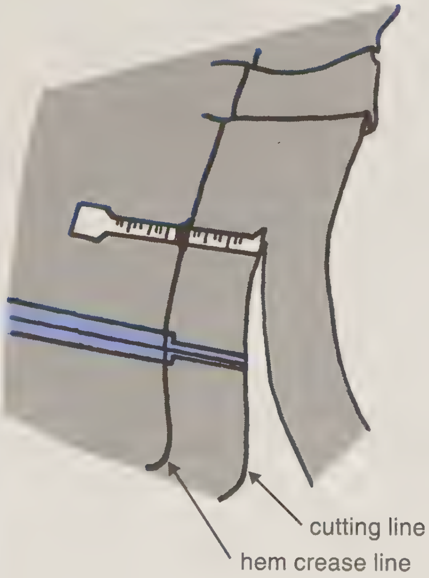
Pants hems cannot be marked with a yardstick or pin marker. Instead, have the other person turn up each pant leg. He or she should place pins at the center front, center back, inseam, and side seam. Generally, the hem of full-length pants should rest on the shoe in the front. It should slope down slightly toward the back.

To mark hems for long sleeves, try on the garment. Find the sleeve length you prefer when your arm is bent in front of you. Turn under the hem and secure it with a pin. Then hold your arm straight down in a relaxed position. Have the other person finish pinning the sleeve hem in place.

Preparing the Hem

Follow these steps:

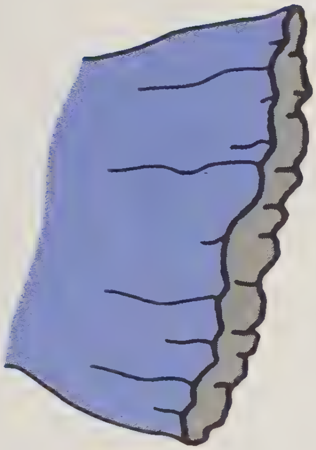
1. Press in a light crease along the hemline markings.
2. Decide how wide the hem should be. The width of the hem is determined by the fabric and garment style. Hems are often 2 to 3 inches wide on straight garments. Flared hems are usually 1½ to 2 inches wide. For some fabrics and garment styles, narrow hems of 1 inch or less are used. A narrower hem width reduces bulk and helps keep the fabric from sagging. Sheer fabrics usually have a very narrow rolled hem. Generally, your pattern instruction sheet will indicate the appropriate hem width.
3. Trim the hem to the desired width. Use a seam gauge to measure as you cut. Be accurate and careful.
4. To avoid a bulge at seams, trim the seam allowances that will be inside the hem to ¼ inch.
5. Prepare the edge of the hem using a method that is appropriate for your fabric and garment design. See Lesson 23, "Hemming Methods," for help in selecting the method to use.



Rippled or Lettuce Hem

Use this hem on soft, stretch knit fabrics when a ruffled effect is desired. This method may not be suitable for all knits. If the knit runs, try another method. To make the hem, follow these steps:

1. Mark the hem as suggesed in the general instructions. There will be no hem allowance. Trim the hem to the desired finishing length or add ⅜ inch depending on the hemming method.
2. Adjust the sewing machine zigzag stitch. Make the stitch suitable for the fabric you will be using. Practice on a scrap of fabric before hemming the garment.
3. Make a row of zigzag stitches along the edge of the fabric, stretching the fabric gently to make the hem curl. (Greater stretch will produce more ripples.)
4. If you are working with fabric that will ravel, press under ⅜ inch along the hem edge. Then straight stitch (or zigzag) along the edge, stretching gently.
5. When finished, the fabric will spring back from being stretched. It will have a ruffled appearance.

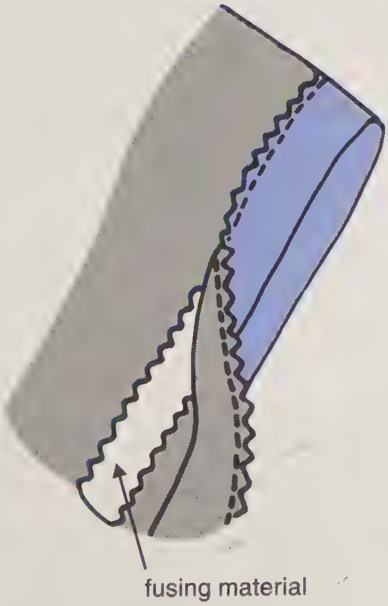


Fused Hem

A fused hem saves time because you do not have to stitch the hem in place. Do not use this hem on rough textured fabrics, heavy fabrics, or those that ravel. Use with caution on all fabrics.

Always test your fabric before applying a fused hem to your garment. An imprint of the fusing material may be visible from the outside of the garment with some types of fabric. To make the hem, follow these steps:

1. Mark and prepare the hem as suggested in the general instructions.
2. Pink the edge of the hem to make it less visible on the outside of the garment.
3. Cut a strip of fusible web the length of the hem. Pinking the edges of the strip may help to prevent fusing lines from showing through to the outside of the garment.
4. Position and fuse the strip according to the package instructions.



Name ______________________________

Date ____________________ Period ____________

Evaluation Criteria: Hem

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
The hemming method is appropriate for the type of fabric and garment design.				
No puckers are in the hem.				
Width of hem is appropriate for garment (neither too wide nor too narrow).				
Hand stitching is uniform in size and shows as little as possible. Knots do not show.				
Machine stitching is even.				
Shows evidence of having been pressed as sewn.				
Hem is same width the whole length.				
Hem hangs straight when garment is worn.				
Hem is correct length.				

Lesson 43

Attaching Fasteners

Objectives

This lesson will help you attach fasteners. You will apply the following, previously acquired skills:

Lesson 5: Reading the Instruction Sheet
Lesson 6: Pattern Symbols
Lesson 9: Transferring Pattern Symbols to the Fabric
Lesson 11: Operating the Sewing Machine
Lesson 20: Interfacing
Lesson 22: Hand Stitching

Helps for Success

Attaching fasteners is often the final step of constructing a garment. These guidelines will help you attach fasteners securely and in the proper location.

Marking Buttonhole Location

Transfer buttonhole markings from the pattern to the garment. Mark on the outside of the garment piece. A chalk pencil works well for this process. Measure between the buttonhole markings to be sure you have spaced them evenly.

Buttonholes will usually be located on the left front opening for men's clothing. They will be on the right front opening for women's clothing.

Making the Buttonhole

Always practice making a buttonhole on a scrap of the fabric that you are using. Work on a sample that is exactly like the garment—generally two layers of fabric with a layer of interfacing between. If the buttonhole does not lie flat and smooth, try using a water soluble stabilizer for additional support as you stitch.

Follow the directions for making a buttonhole that came with the sewing machine model you will be using. (See Lesson 11, "Operating the Sewing Machine.") When stitching buttonholes, once around is generally enough. Buttonholes are often overdone, giving a homemade look to the garment.

Marking Button Location

Mark the location of one button at a time, starting at the top or bottom button on the garment. Stitch the button in place. Then close the button and mark the location of the next button. If buttons are randomly stitched onto the garment, excess garment fabric between the buttons may result. This will mean taking off all the buttons and stitching them in place again.

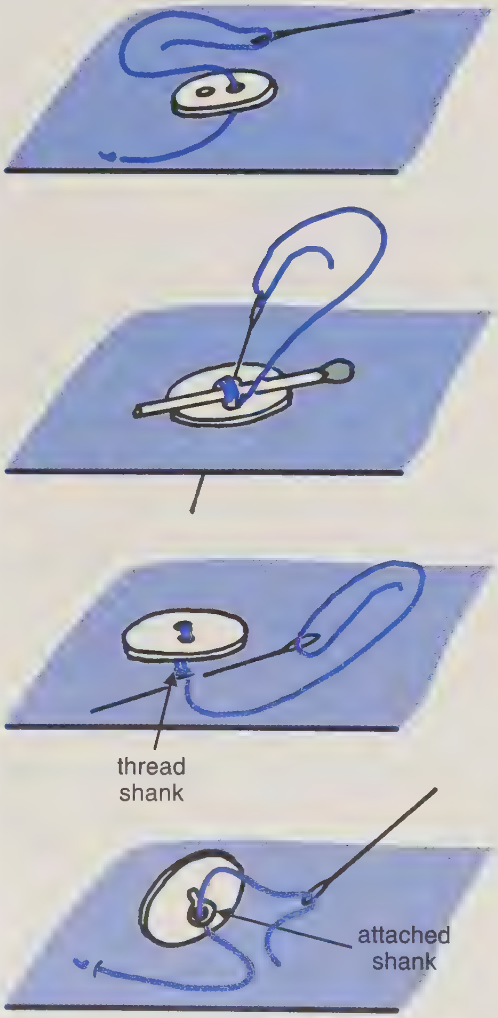
Sewing on the Button

To sew a button onto a garment, follow these steps:

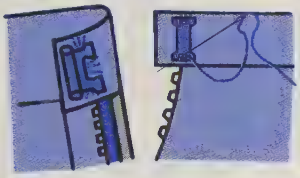
1. Use a needle and a knotted thread. Make a small stitch in the fabric where the button will be located. Insert the needle through one of the holes on the underside of the button. Pull the thread through the button.
2. Hold a match, toothpick, or other similar object on the button between the holes, or slip a button spacer between the button and garment. Push the needle down through the second hole on a 45 degree angle toward the center of the button and through the fabric. Bring the needle up through the first hole and down through the second hole four or five more times.
3. Remove the match, toothpick, or button spacer and pull the button up. Bring the needle down through the second hole in the button, but do not push it through the fabric. Wrap the thread around the loose threads under the button. Do this four or five times. This creates a thread shank for the button to allow easy buttoning.
4. End the stitching by bringing the needle through to the back of the fabric. Take several small stitches running the needle through the thread loop and pulling tight.

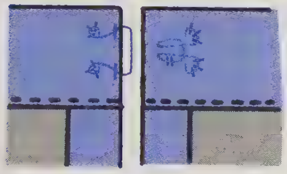
Some buttons are made with attached shanks. Simply sew these on the garment beginning and ending as described above.

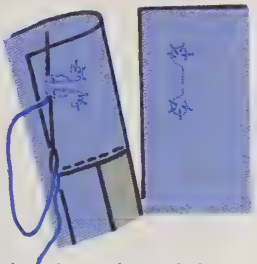
Note—Buttons may be reinforced by stitching a small button on the underside of the fabric or by placing a small piece of hem tape under the button between the facing and fashion fabric.



Sewing on Hooks and Eyes


heavy-duty hook and eye


hook and round eye


hook and straight eye

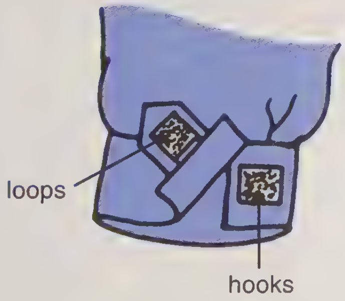
There are a number of types of hooks and eyes. Select the type that is best for your purpose.

A heavy-duty hook works best for waistband closures. Sew the hook close to the edge of the overlap of the waistband. Close the zipper and position the eye so that the opening will lie flat when completed.

Neckline hooks are smaller than those used on waistbands. They come with two types of eyes: round or straight. The rounded eye should be used when the edges of the garment meet but do not overlap. When using this type of eye, extend the eye over the edge of the garment slightly. The straight eye should be used when the garment edges overlap. When using this type of eye, sew the hook on first. Then position the eye for a flat closing.

Position the hook on the wrong side of the overlapping part of the garment about ⅛ inch from the edge. Sew with small stitches, catching only the inside layer of the fabric. Also, sew the end of the hook to the fabric.

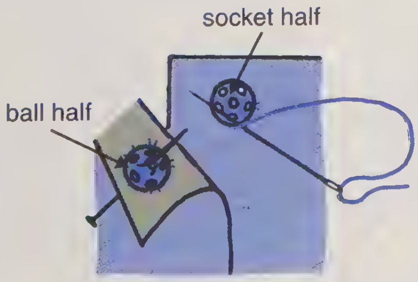
Hook and Loop Tape



Hook and loop tape comes as either iron-on or sew-on. It may be purchased by the inch or in packages of precut pieces. Follow the manufacturer's directions for attaching the iron-on variety. For best results, use on medium to heavy fabrics. Do not use on heat-sensitive fabrics. Test fuse on a fabric scrap to be sure adhesive does not bleed through or fabric does not scorch.

To apply the sew-on variety, pin the loop side of the tape to the overlapping part of the garment. Place it about ¼ inch from the edge. Machine or hand stitch around the edges of the tape. Pin the hook side of the tape in position and sew in the same manner.

Sewing on Snaps



Place the ball half of the snap on the wrong side of the overlapping part of the garment. Position it about ⅛ inch from the edge of the garment. With small stitches, catching only the inside layer of fabric, sew in place.

Stick a pin through the center of the ball. Close the garment and mark where the pin pierces the underlapping part of the garment. Center the socket half of the snap over the mark. Check to be sure the garment will lie smoothly when snapped. Stitch as before.

Name ______________________________

Date ____________________ Period __________

Evaluation Criteria: Fasteners

Before you begin construction, read through the criteria listed below. After constructing each detail, complete this form according to your teacher's directions. Turn this sheet in to your teacher and be prepared to discuss each item.

	Did not follow procedure correctly	Followed procedure but had some difficulty	Nicely done but with more practice could do better	Exceptionally well done
Fasteners are located so that garment openings lie flat.				
Handstitching is uniform in size and shows as little as possible. Knots do not show.				
Fasteners are securely attached.				
Buttonholes fit size of button.				
Machine buttonholes are neatly done.				
There is interfacing under buttons and buttonholes.				
Buttonholes are evenly spaced and an appropriate distance from edge of garment.				
Threads are clipped.				

Unit 7

Learning to Sew with Sergers

Unit 7

Learning to Sew with Sergers

This unit introduces you to sewing with sergers. It consists of three lessons.

Lessons 44 and 45

You will begin learning about sergers by studying Lesson 44, "Operating the Serger Machine." Once you have mastered using the serger, Lesson 45, "Serger Construction Techniques," will provide you with information on specific construction procedures. These techniques are very different from those you learned when using a conventional sewing machine.

These lessons are organized like the lessons in Unit 3. Each lesson includes a list of objectives that you should be able to demonstrate after completing the lesson. A list of basic sewing terms is included. You will find that some words in these lessons were defined earlier in this textbook. You may want to refer back to the appropriate lessons, if you have any questions. You will also find the three types of learning processes with which you have become familiar: gathering information, practicing learning, and evaluating learning. As before, your teacher will give you directions on how the lessons are to be completed. Your teacher may work through the lessons with you or ask you to complete the lessons on your own.

Lesson 46

The format of this lesson will also look familiar. This is the same format you followed in Unit 6, when you constructed a project using a conventional machine. This lesson begins with a list of previously acquired skills needed to successfully complete the lesson. As you study this lesson, you will discover that you must apply the knowledge and skills learned in earlier lessons in this textbook. If you have any problems constructing a serged project, return to the appropriate lessons and review the necessary skills.

In this lesson, you will also find the familiar "Helps for Success" sections. Study these suggestions carefully. They provide valuable information on how to construct details of serged projects. Your pattern instruction sheet may be another valuable source of helpful information for serging.

Lesson 44

Operating the Serger Machine

Objectives

This lesson will help you to

- explain how sergers make sewing fast and easy and how they differ from conventional sewing machines.
- locate and explain the functions of various serger machine parts.
- identify the different types of serger stitches.
- explain the considerations to be made when selecting thread.
- thread a serger.
- operate and maintain a serger.

Words to Know

serger
differential feed regulator
stitch finger
knives
loopers
thread cone
cross-wound thread
cone adapter
spool cap
easy-threading method
2-thread overedge stitch
flatlocking
3-thread overlock stitch
3/4-thread overlock stitch
2-thread chain stitch
4-thread stitch
5-thread stitch
chaining off
seam sealant

Gathering Information

A ***serger*** is a specialized type of sewing machine that can stitch, trim, and finish seams all in one simple step. Sergers are sometimes called *overlockers*.

This lesson will provide you with information and activities that will teach you how to use a serger. You will learn how sergers differ from conventional sewing machines and how to operate them correctly. This will give you a chance to experience fast, fun, and creative sewing using a serger.

How Sergers Make Sewing Fast and Easy

Sergers have been used by the ready-to-wear industry since the early 1900s. Today, a wide variety of models are available to the home sewer. Sergers can save you time, and help you create professional-looking projects.

With a serger, the inside of unlined garments can be finished to look terrific. Outer edges can also be finished, eliminating the need for facings, ribbings, and bands. Narrow or rolled hems can be constructed quickly on anything from single-layer ruffles to flared skirts to tablecloths.

(Continued)

Sergers can sew on a wide variety of fabrics. Slippery fabrics are easier to keep in place with a serger than with a conventional machine. Lace and elastic can be applied faster than ever before. Stretch fabrics can be stitched in a snap, allowing you to make swimwear, aerobic wear, and knit items look like ready-to-wear garments. Sergers can also be used to create decorative stitching using lightweight yarns, metallic threads, and even thin ribbons.

How Sergers Differ from Conventional Machines

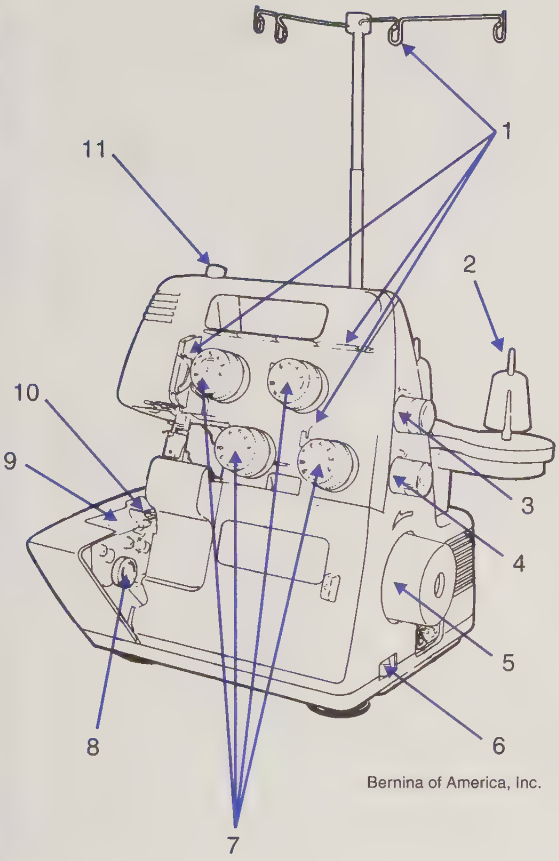
Although you will find endless ways to use a serger, you still need to use a conventional machine. Sergers can't do everything. For instance, buttonholes and topstitching cannot be stitched by a serger, and you may not want to use a serger to insert zippers. Sergers differ from conventional machines in the following ways:

- Sergers are fast! They can stitch from 1,300 to 1,700 stitches per minute. Conventional machines stitch only 900 to 1,000 stitches per minute.
- Sergers have a longer presser foot and feed dogs that hold fabric firmly in place. Fabric won't shift as you sew. Lightweight fabric won't pucker or slip. You usually don't need to pin or baste seams.
- Sergers won't jam when sewing without fabric.
- Sergers use two to five spools of thread, one for each needle and looper.
- Sergers do not have bobbins. Instead they have loopers, usually upper and lower.
- Sergers have upper and lower knives that trim the seam allowance before the seam is finished.
- Sergers use a knitting process to form stitches. The needle threads intertwine with the looper threads as they are wrapped over the stitch finger.

Serger Machine Parts

Although there are a variety of types and models of sergers, they have many similarities. Following is a list of the names and functions of the basic parts found on most sergers. As you read about each part, locate it on the machine diagrams in this lesson.

(Continued)



Bernina of America, Inc.

Thread guides (1). Guide the threads from the spools to the needles and loopers.

Spool pins (2). Hold spools, cones, or tubes of thread.

Stitch length regulator (3). Adjusts the number of stitches per inch. Adjustments may be made by loosening a screw, moving a lever, or turning a dial.

Differential feed regulator (4). Adjusts the front and back feed dogs to operate at different speeds. Not all sergers have this control.

Hand wheel (5). Turns to raise or lower the needles.

Power and light switch (6). Turns on the serger and light.

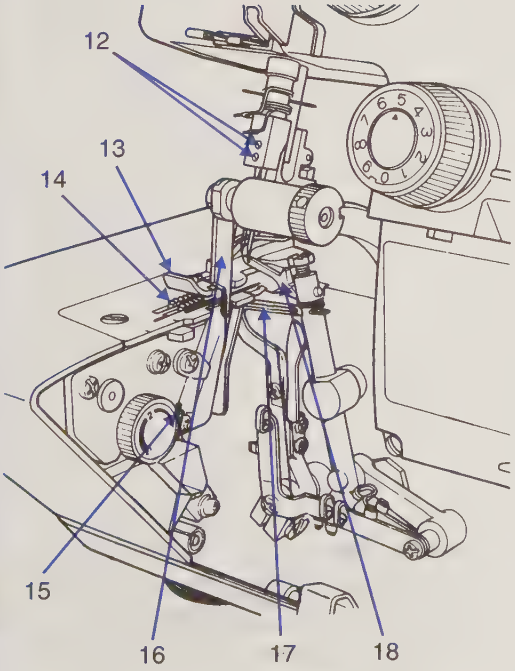
Tension regulators (7). Apply tension to the threads so they feed at a constant rate.

Stitch width regulator (8). Adjusts the position of the knives and stitch finger. Not all sergers have this control.

Throat plate (9). Covers the area below the needle.

Stitch finger (10). A metal prong around which stitches are formed. The width of the stitch finger determines the stitch width. The stitch finger may be located on the throat plate or the presser foot.

Pressure regulator (11). Adjusts the amount of pressure applied to the presser foot and the fabric.



Bernina of America, Inc.

Needle clamp screws (12). Hold needles in place.

Presser foot (13). Holds fabric in place as the serger stitches.

Feed dogs (14). Move fabric under the presser foot.

Knives (15 and 16). Trim seam allowances as stitches are formed. Sergers have upper and lower knives. On some sergers, the knives can be disengaged when trimming is not desired.

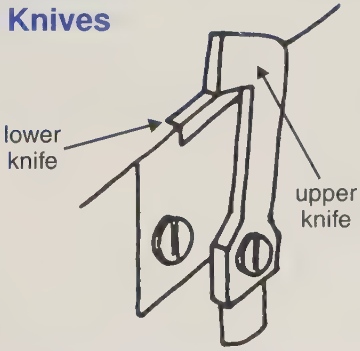
Loopers (17 and 18). Are necessary in forming stitches. Sergers have one to three loopers. They are referred to as upper and lower.

Changing the Serger Needles

You will occasionally need to replace the serger needle(s). In fact, you will find that needles wear out faster on sergers than on conventional machines. A blunted or burred needle can cause stitching problems. Always check the needle(s) before you begin serging.

When changing needle(s), refer to the machine manual for the correct type and size. Some sergers use conventional needles, while others use industrial needles. Both types are available in regular point and ballpoint in a variety of sizes for serging on different weight fabrics. To insert the needle(s) correctly, always place the grooved side to the front and the flat side to the back.

Changing the Knives



As you serge, the excess seam allowance is trimmed away by the knives. These knives will eventually become dull. Generally, one knife is made from a hard alloy material. This knife will not dull as fast and will not need to be replaced as often as the other, less durable knife. Sewing with thick or synthetic fabric can cause the knives to dull faster. To change the knives, follow the directions in the machine manual.

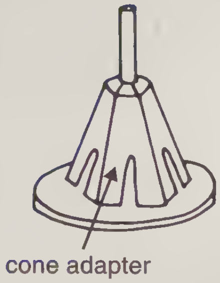
Selecting Thread

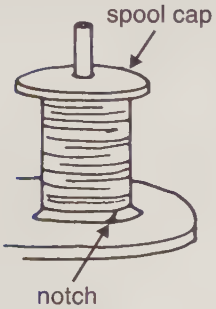
Although regular sewing thread may be used with sergers, thread designed especially for sergers offers many advantages. The following tips will help you select the right thread.

Size and strength. Serger threads are finer in size and have an extra smooth finish for high-speed sewing. Always use a good quality thread to prevent excess breaking and lint accumulation. For normal, nondecorative stitching, use the same type of thread for the needles and loopers to reduce tension adjustments.

Color. When selecting serger thread to match your fabric, you may not find a wide choice of colors. Try selecting a color that blends rather than matches. A shade slightly darker than the fabric will blend best. You may wish to match the needle thread more closely than the other threads because it is more likely to be seen.

(Continued)





Spool types. Because sergers use more thread, buying larger spools will be more economical. Serger thread may be purchased in tubes or ***thread cones***. These vary in size. Serger threads are generally ***cross-wound*** on the spool. This allows the thread to peel off the top evenly and easily during high-speed sewing.

Thread cones and conventional spools require special adapters before they can be used. Cone adapters and spool caps usually come with sergers. They help thread pull off the spools evenly. How they are used will vary with each serger. Generally, the ***cone adapter*** is placed on the spool pin and the thread cone is slipped over it. Conventional spools are placed on the spool pin with the notched end of the spool down. The ***spool cap*** is then placed over the spool.

Decorative threads. Many specialty threads are available for decorative seaming and edging. Buttonhole twist, pearl cotton, lightweight baby yarn, soft sport yarn, and thin ribbon are examples. Metallic thread, texturized nylon thread, crochet thread, embroidery thread, and tatting thread can also be used for decorative serging. In fact, you can use any thread or yarn that will fit through the eye of the looper.

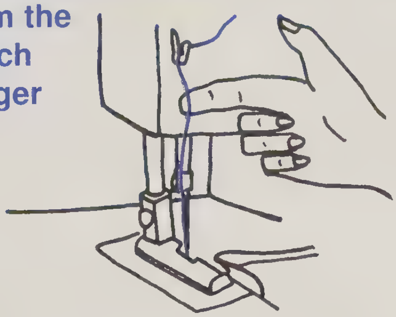
Threading the Serger

Threading sergers may seem complicated at first. However, with practice, you will soon be able to do it quickly and easily. Following the threading chart located in the machine manual or printed on the serger is helpful. Thread guides are often color or symbol coded to make threading easier.

Thread sergers in the order suggested by the manufacturer. Most sergers thread right to left, with the needles being threaded last. Loopers and needles must be threaded in the correct order. Otherwise, threads may break, or stitches may not form correctly. The lower looper will be the most difficult to thread. Use long handled tweezers to make this task easier. Also, make sure the threads are properly positioned in the tension regulators. Tug on each thread. If the thread pulls with some resistance, it is generally positioned correctly.

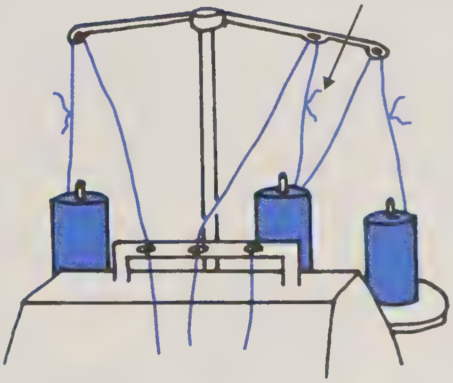
Keep in mind that loopers use more thread than needles in forming stitches. Rotate thread spools occasionally to use the thead up evenly.

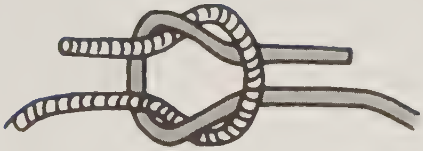
Removing Stitches from the Stitch Finger



Occasionally, stitches must be removed from the stitch finger. To do this, raise the presser foot and needle. Gently pull the needle thread just above the last thread guide. This will provide a little slack in the thread. Then carefully pull the thread chain off the stitch finger.

Easy-Threading Method





square knot

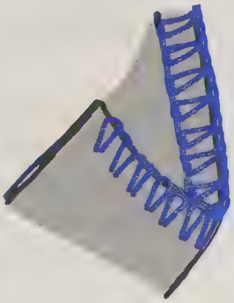
The ***easy-threading method*** eliminates the need to thread the serger each time you change thread. Follow these easy steps:

1. Clip threads below the thread guides located above the spools. Replace the spools and tie the threads from the new spools to the old threads using square knots. Tug on the knots to make sure they are secure. (You do not want the knots to pull out halfway through the serger.) Trim thread ends.
2. Lift the presser foot and raise the needle. Some sergers may require the tension to be loosened. Remove the threads from the stitch finger and pull each one through the serger. First pull the lower looper thread through, then pull the upper looper thread through. Pull the needle thread(s) through last. Do not try to pull the knots through the eye(s) of the needle(s). Instead, cut the knot from the thread and rethread the needle. Some sergers can be run slowly to draw the thread(s) through them.

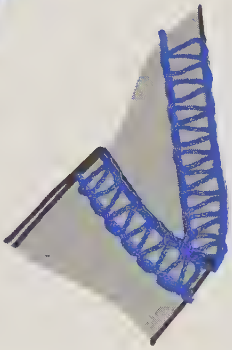
Types of Serger Stitches

Sergers are classified by the number of threads they use. They perform differently depending on the number of threads, needles, and loopers they have. Sergers can have two to five threads, one to two needles, and one to three loopers. There are seven basic serger stitches. Many sergers can make more than one stitch by varying the number of needles and loopers used. However, no one serger can make all the stitches. Read your machine manual to learn what your serger is capable of doing. Following is a list of the basic serger stitches.

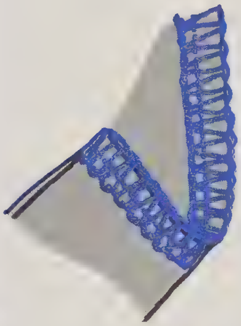
(Continued)



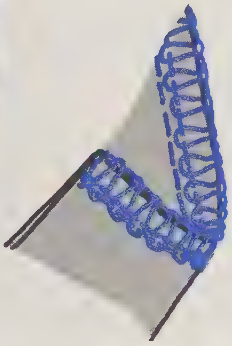
2-thread
overedge stitch



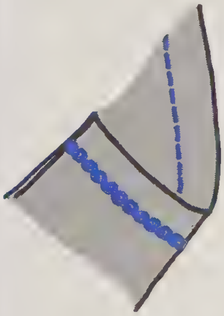
3-thread
overlock stitch



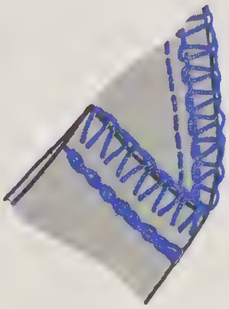
3/4-thread
overlock stitch



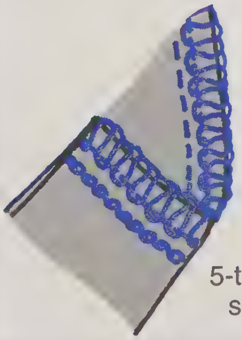
3/4-thread
overlock stitch
variation



2-thread
chain stitch



4-thread
stitch



5-thread
stitch

2-thread overedge stitch. *(1 needle and 1 looper)* The threads do not connect or lock at the seamline. This stitch is not strong enough to sew seams. However, it is excellent for finishing edges and flatlocking. (***Flatlocking*** is joining two layers of fabric together by serging a seam and then pulling the seam apart until it lies flat.) Some 3- and 4-thread sergers can convert to two threads.

3-thread overlock stitch. *(1 needle and 2 loopers)* The threads connect or lock at the seamline. The stitch can be used to sew seams or finish edges. Flatlocking is possible with tension adjustments. The stitch is stretchy and good for constructing swimwear, aerobic wear, and knit garments. The stitch is also strong enough to use on woven fabrics.

3/4-thread overlock stitch. *(2 needles and 2 loopers)* This is a 3-thread stitch with a fourth stitch running down the middle, adding durability. Seams constructed with this stitch stretch almost as much as a 3-thread stitch. The stitch is good on all fabric weights. It is especially good for constructing active wear. For a wide 3-thread stitch, drop the inside needle. For a narrow 3-thread stitch, drop the outside needle.

3/4-thread overlock stitch variation. *(2 needles and 2 loopers)* This stitch is a variation of the 3/4-thread overlock stitch above. This stitch looks slightly different. The right needle thread cannot be dropped. The left needle thread may be dropped for a narrow stitch.

2-thread chain stitch. *(1 needle and 1 looper)* This stitch is formed by the left needle and the lower looper on the 4- and 5-thread machines.

4-thread stitch. *(2 needles and 2 loopers)* This stitch combines a 2-thread chain stitch and a 2-thread overedge stitch. The chain stitch makes a secure seam. The overedge stitch finishes seam edges. The 4-thread stitch is excellent for woven fabrics. It is not as good for stretch knits, because it has less stretch than a 3-thread stitch.

5-thread stitch. *(2 needles and 3 loopers)* This stitch consists of a 2-thread chain stitch and a 3-thread overlock stitch. Each stitch can be used alone.

Machine Stitching

You will find stitching with a serger quite different from stitching with a conventional machine. To serge, follow these steps:

1. Begin without fabric under the presser foot. With the presser foot in a lowered position, hold the thread chain or tails lightly behind the presser foot. Step on the foot control and form a few inches of thread chain. This is called ***chaining off***.
2. Place fabric in front of the presser foot, aligning it with the stitching guidelines for the proper seam width. Usually, there is no need to lift the presser foot. The longer feed dogs will pull the fabric under the presser foot. For some slippery or heavy fabrics, you may have to lift the presser foot.
3. Step on the foot control and guide the fabric under the presser foot, controlling the seam width as you serge. Be careful not to push or pull the fabric.
4. After serging the seam, chain off about 5 inches. Then use the serger to cut the chain. This is done by bringing the fabric to the front of the serger. Place the chain over the presser foot and into the knives. As you run the serger, the knives will cut the chain. For some sergers, the chain must be placed under the presser foot. Be sure to leave at least 2 inches of chain attached to the fabric.

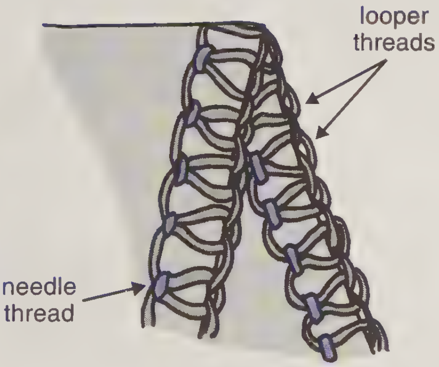
When Threads Break

Occasionally, you will run out of thread, or a thread will break as you are serging. When this happens, lift the presser foot. Raise the needle out of the fabric and remove the fabric from the serger. Gently pull the chain off the stitch finger. Rethread the machine and chain off 3 inches. Place the fabric back under the presser foot. Line up the fabric so the new stitching will overlap the previous stitching by ½ inch. The seam edge should rest against the knife. Place the needle in the fabric. Lower the presser foot and stitch, being careful not to cut the original stitches.

Stitching Guidelines

Some sergers have stitching guidelines marked on the machine front. They may be located in different places, depending on the serger. If your serger does not have stitching guidelines, make your own with masking tape. You may also mark the seamline on the fabric using a water soluble or air erasable marking pen. When serging, the seamline is where the needle enters the fabric. As you serge, learn to watch the knives, rather than the needles as in conventional sewing. This will help you correctly guide fabric through the serger.

Adjusting the Tension

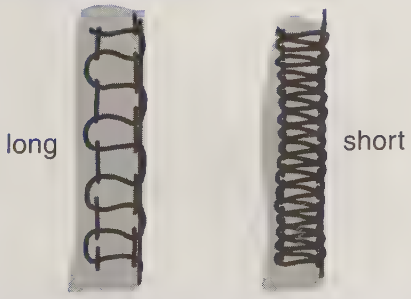


balanced tension

The tension must be adjusted with any change in fabric, thread, or stitch pattern. A serger may have from two to five tension regulators—one for each thread. Therefore, learning to adjust the tension may seem confusing at first. However, with practice, you will soon be able to do it quickly and easily.

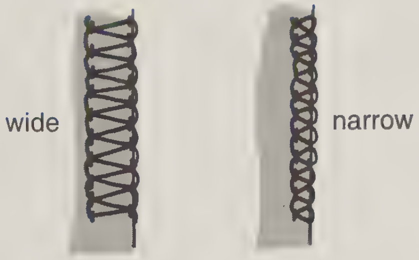
For a strong seam that will not pull apart, use a balanced tension. When the tension is balanced, the needle threads should be smooth with no loops. The looper threads should interlock at the edge of the fabric. Loops should not pull to either side. Fabric in the seam should not curl or pucker. The tension can be balanced by tightening or loosening the needle and looper tensions. Check your machine manual for correct tension settings and how to make adjustments. Always serge a test seam on scraps from the fabric you will be using. Some computerized models make these adjustments automatically.

Adjusting the Stitch Length



Stitch length can be varied using the stitch length regulator. The number of settings available depends on the machine brand. Use a longer stitch length for heavy fabrics and a shorter stitch length for lightweight fabrics. You will need to adjust the stitch length when finishing edges and constructing narrow rolled or unrolled hems. Some computerized models make these adjustments automatically.

Adjusting the Stitch Width



Stitch width refers to the bite of, or the amount taken by, the overlock stitch. Stitch width can be varied by removing a needle, or adjusting the knife position and size of the stitch finger. Some sergers have a dial that changes stitch width by adjusting the position of the knives and stitch finger for you. Generally, a wider stitch width is used for heavy fabrics and a narrower stitch width is used for lightweight fabrics. Tension adjustments may also be necessary when changing from one stitch width to another.

Adjusting the Differential Feed Regulator

Some sergers have a differential feed regulator. This control adjusts the speed at which the feed dogs move the fabric under the presser foot. This feature makes it possible to serge stretchy, heavy, or slippery fabrics without causing stretching or puckering.

Read the machine manual to determine the normal setting. By moving the differential feed regulator to a higher number, the front feed dog will move at a faster rate. This causes more fabric to feed under the front of the presser foot, than is released from the back. Use this setting for heavy or stretchy fabrics. Moving the regulator to a lower number will cause the front feed dog to move at a slower rate than the rear feed dog. Use this setting for slippery or lightweight fabrics. Always do a test on a fabric scrap before serging on your project. Some computerized models make these adjustments automatically.

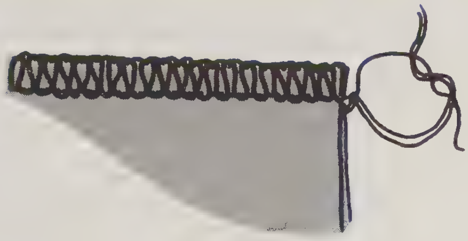
Adjusting the Pressure Regulator

The pressure regulator is located on top of the serger. To increase pressure on the presser foot, turn the regulator to the right. To decrease pressure, turn it to the left. Increase pressure for heavy fabrics and decrease pressure for lightweight fabrics. However, if you are using extremely heavy fabric, such as fake fur, you may need to decrease the pressure. Some computerized models make these adjustments automatically.

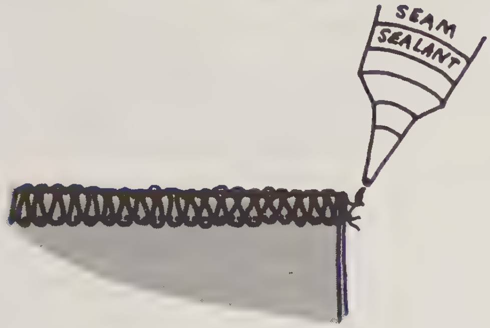
Securing Seam Ends

Backstitching is not possible on a serger, so use other means to secure the beginning and end of the seams. When seam ends must be secured, try any of the following methods:

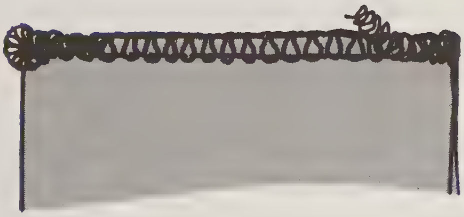
(Continued)



Method 1. Knot the thread chain close to the fabric edge.

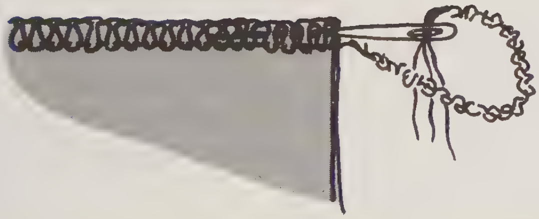


Method 2. Use seam sealant on the thread chain near the fabric edge at the end of the seam. ***Seam sealant***, a liquid glue, is best used in small areas where it will not show. This is because it can stiffen and darken the fabric. After the sealant dries, cut off the excess chain. If desired, the chain may be knotted before seam sealant is applied.



Method 3. Secure the chain tails in the seam. At the beginning of the seam, make one stitch on the fabric. Lift the presser foot and swing the chain to the serger front. Then, place the chain on the seam allowance, lower the presser foot, and serge over the chain.

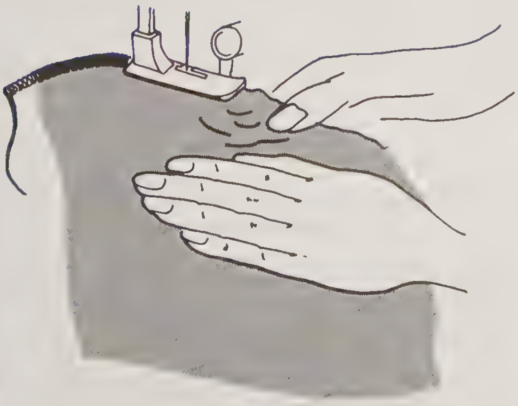
At the end of the seam, stop serging when the needle is one stitch off the fabric. Pull a little slack in the thread above the needle. Lift the presser foot, and raise the needle. Slip the chain off the stitch finger. Flip the fabric over and to the front of the serger. Lower the presser foot and serge over the last few stitches and off the edge of the fabric. Be careful not to cut the stitches already sewn.



Method 4. Thread the excess chain through a large-eyed needle. Run the needle under six to eight stitches. Cut off the excess chain.

Note—When a serged seam is crossed by another seam, securing the ends may not be necessary.

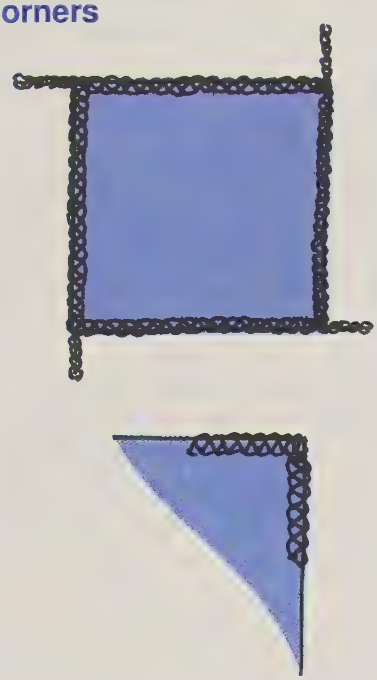
Serging Curves



Serging curved areas can be tricky. Serge slowly, feeding the fabric with your hands at the front of the presser foot. Do not try to guide the fabric from the side or behind the presser foot. If seams are very curved, lift the presser foot every few inches and turn fabric under it.

You will not always be able to serge outside curves using a serger. For instance, when constructing a collar, the outside curved edge must be clipped. This allows the collar to lie flat when it is turned. Clipping would cause the serged stitching to be cut, and the seam would not hold. Use a conventional machine for seams with outside curves.

Turning Outside Corners

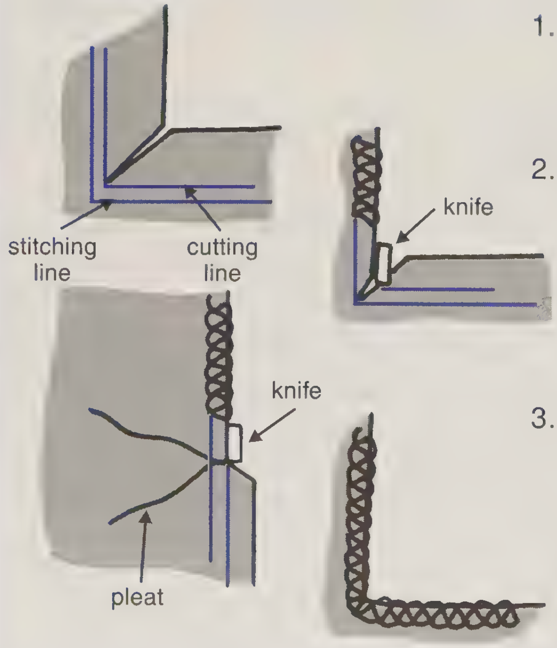


There are two methods for serging right angle outside corners. Follow one of the procedures below:

Method 1. This method will be the easiest, but it is not the most attractive. Serge one side, leaving a chain at both ends. Serge the remaining sides in the same manner. As you serge remaining sides, you will cross previous stitching, cutting off the chain ends. When finished, secure seam ends.

Method 2. This method will be more attractive, but it requires experience. Serge slowly to the corner. When the needle is one stitch off the fabric, stop. Lift the needle and presser foot. Pull a small amount of slack in the thread above the needle. Be careful, because too much slack will result in a loop in the stitching. Gently pull the chain off the stitch finger. Turn the fabric so the next edge is touching the knife blade. Lower the presser foot and continue serging.

Turning Inside Corners



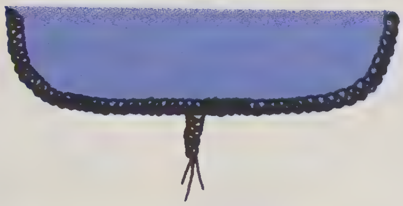
Serging right angle inside corners can be difficult. Follow these steps:

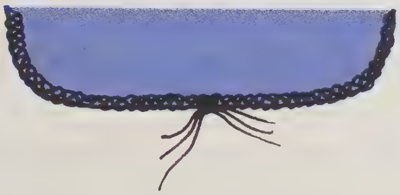
1. Mark stitching and cutting lines for 1 inch on each side of the corner. Clip to the corner.
2. Serge the seam until the knife comes to the cutting line on the next edge. Lift the presser foot and straighten the corner. Fold the fabric away from the knives. A pleat will form to the left.
3. Serge the remaining edge. The fabric should lie flat after serging. Do not clip the stitching at the corner.

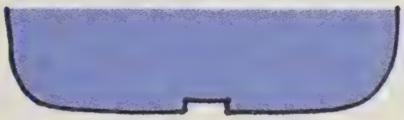
Serging in a Circle

Serging in a circle refers to serging that begins and ends in the same place. Serging seen around the edges of some place mats and along the hems of some garments are examples. There are two ways to serge in a circle. Follow one of these methods:

(Continued)







Method 1. When the edge will not show on the finished item, simply serge all the way around, overlapping stitching. Then serge off the fabric edge and trim the chain.

Method 2. When you want an attractive edge on necklines, hems, or place mats, try this method. Pull unchained threads from the stitch finger. Hold the thread tails to the back of the serger. Beginning in an inconspicuous place, serge around the edge. Overlap only a few stitches at the end. Then, lift the presser foot and needle and pull unchained threads from the serger. Tie knots in the threads. Trim the threads and secure with seam sealant.

This technique can also be used when trimming off a seam allowance. Cut away the seam allowance 1 inch at the place you plan to begin serging.

Ripping Out Stitching

It is best to avoid making mistakes when using a serger. Ripping out serged seams can be time-consuming. Also, since sergers trim seam allowances as they stitch, some mistakes are difficult to correct.

However, seams can be ripped out when needed. The method used depends on the type of stitch. For a 2-thread stitch, slide a seam ripper down the fabric under the stitches and pull out the threads. For 3- and 4-thread stitches, snip the needle threads every three or four stitches. Then pull on the looper threads. The stitching will unravel. Chain stitches can be removed by pulling on the looper thread.

Care of the Serger

Proper care of the serger will result in fewer machine problems. Follow care and maintenance recommendations in your machine manual. Oil the serger regularly. Because the serger trims fabric as it stitches, special attention must be given to keeping it clean. Use a soft brush to remove lint from the knife area. Cans of compressed air are also available for this task.

Computerized Sergers

In addition to basic sergers, computerized models are also available to the home sewer. These machines automatically perform many tasks, including the following:

- The display screen indicates basic setup information for specific stitches.
- Interactive visual-touch screens enable you to choose a stitch with a single touch.
- You can customize settings and store them in memory to reuse at a later date.
- Some computerized models automatically set tension, stitch length, and differential feed for the fabric and technique used.

Regardless of the type of serger used, it can save you time and help you create professional-looking projects.

Machine Problems

As with any conventional machine, your serger may not always work properly. If you have problems, run through the following checklist:

- Check to see if the serger is properly threaded. If necessary, pull all the threads from the serger. Rethread the serger in the order recommended by the manufacturer.
- Check to see if the knife area is clean and free from lint.
- Check the tension. Refer to your machine manual for how to make adjustments.
- Check to see if the needles are inserted correctly. If they are not, replace them according to the machine manual.

Name ________________________________

Date ____________________ Period ____________

Activity 44-1: Identifying Serger Machine Parts

At the bottom of this page is a list of basic serger machine parts. Notice the headings. They will help you learn the functions of the various parts.

Your teacher will give you a diagram of the serger you will be using. Attach the diagram in the space provided below. On the diagram, locate each of the parts listed at the bottom of the page. To help you do this, refer to the "Serger Machine Parts" box.

Note: Some sergers may not have all of the following parts.

Threading
thread guides
tension regulators (2-5)
loopers (1-3)
spool pins (2-5)

Needle
needles (1-2)
needle clamp screws
throat plate

Pressure
pressure regulator
presser foot
presser foot lever

Knives
movable knife
stationary knife

Feeding
feed dogs
differential feed regulator

Miscellaneous
power and light switch
hand wheel

Stitch Control
stitch length regulator
stitch width regulator
stitch finger

In addition to the parts listed above, your teacher may help you locate the following:

needle/knife guard
sewing light
stitching guidelines
thread guide pole
thread stand
threading chart

Name ______________________________

Date ________________ Period __________

Activity 44-2: Practicing Using the Serger

Supplies needed:

serger
conventional machine
serger machine manual
cones and spools of thread
fabric swatches

scissors
machine needles
serger attachments
screwdriver (if required)

The left-hand column of the following chart lists various tasks required in using the serger. Demonstrate your ability to perform each task. Then complete the right-hand column by providing the sign of task performance requested. This may require that you make a sample or answer a question. You may need to obtain the signature of someone who observed you perform the task. In this case, your teacher will tell you who is to observe your task performance.

Task	Sign of Task Performance
How sergers differ from conventional machines Using previously learned knowledge of conventional machines and sergers, analyze how they are different.	What machine parts does the serger have that the conventional machine does not have? ____________ ______________________________
Changing the serger needle(s) Remove the needle(s). Inspect for blunt or burred ends. Replace the needle(s) correctly following the machine manual.	Signature of observer: ______________________________
Locating the knives Locate the upper and lower knives on the serger. Read the machine manual to learn how the knives are removed. Do not attempt to remove them.	Signature of observer: ______________________________
Selecting thread Prepare your serger for both spools and cones of thread. Use the cone adapter and spool cap for your serger. Follow the directions in the "Selecting Thread" box.	Signature of observer: ______________________________
Threading the serger Thread the serger, using the threading diagram provided on the machine or in the manual. For easy viewing, use a different color thread for each spool. Be sure to use the correct spool adapters. Use the same type of thread throughout for easy tension control.	Signature of observer: ______________________________
Easy-threading method To shorten threading time, thread the serger by using the easy-threading method. Follow the directions given in the "Easy-Threading Method" box. Continue to use different color thread.	Signature of observer: ______________________________

(Continued)

Name ______________________________

Task	Sign of Task Performance
Types of stitches Read the machine manual to identify which types of stitches your serger can make.	What types of stitches does the serger make? ______________________ ______________________ ______________________ Can either needle thread be dropped? Yes ____ No ____
Machine stitching Practice machine stitching. Follow the procedure described in the "Machine Stitching" box. Use the serger to cut the chain at the end of stitching.	Did you end stitching by cutting the chain using the serger knives? Yes ____ No ____ Show samples of the various stitches that can be made.
When threads break Serge a seam, stopping in the middle of the seam. Remove the fabric from the serger. Resume serging, following the procedure described in the "When Threads Break" box.	Show sample.
Stitching guidelines Find the stitching guidelines on the machine front. Align raw edges of the fabric to a ⅝-inch seam width. Serge, allowing the serger to trim away the seam allowance.	Where are the stitching guidelines located? ______________________ How wide is the finished seam? ______________________ How much did the serger trim away? ______________________
Adjusting the tension Serge a long sample seam, stopping and making tension adjustments at various points along the seam. Adjust one tension dial at a time. Turn the dial tighter, then looser. Serge after each adjustment. Check to see how the adjustments affect the stitch. Return the serger to a balanced tension.	Show sample of various tension adjustments ending with a balanced tension.
Adjusting the stitch length Serge a long sample, making stitch length adjustments at various points along the sample.	Show sample of various stitch lengths.
Adjusting the stitch width Serge a long sample. Make stitch width adjustments at various points along the sample.	Show sample of various stitch widths.

(Continued)

Name ______________________________

Task	Sign of Task Performance
Adjusting the differential feed regulator Locate the differential feed regulator on the serger. Serge on various weights of fabric, experimenting with the differential feed regulator.	What effect did the differential feed adjustment have on the various types of fabrics? ____________________ ______________________________ ______________________________
Locating the pressure regulator Locate the pressure regulator on the serger.	Signature of observer: ______________________________
Securing seam ends Secure seam ends by knotting threads and using seam sealant on the thread chain near the fabric edge. Secure seam ends at the beginning and the end by serging the chain in the seam. Thread the excess chain through a large-eyed needle. Run the needle under the stitching.	Show sample. Show sample. Show sample.
Serging curves Cut two pieces of fabric, one an inside curve and the other an outside curve. Edge stitch each sample using a serger. Serge the same samples again, but this time serge on the ⅝-inch guideline. You will be cutting off the first line of stitching.	Show samples. Where did you place your hands in order to control the fabric as you serged the curves? ____________________ ______________________________ When will you not be able to serge outside curves? ______________________________
Turning outside corners Serge outside corners using both methods described in the "Turning Outside Corners" box. To complete this task, you will also need to refer to the "Removing Stitches from the Stitch Finger" box.	Show sample of Method 1. Show sample of Method 2.
Turning inside corners Cut an inside right angle corner on a piece of fabric. Serge the corner. Follow the directions in the "Turning Inside Corners" box.	Show sample of a serged inside corner.
Serging in a circle Serge a circle, following the procedure for Method 2 described in the "Serging in a Circle" box.	Show sample of Method 2. When would you use Method 1? ______________________________
Ripping out stitching Serge a seam. Using a seam ripper, remove the stitching.	What is the easiest way to remove stitching for the serger you are using? ____________________ ______________________________
Care of the serger Brush away the lint that has collected around the knives of the serger.	Signature of observer: ______________________________
Machine problems List the points you would check if you were having trouble with your serger. Try to list them in the order you would check them. See the "Machine Problems" box for assistance, if necessary.	Serger Machine Problem Checklist 1. ____________________ 2. ____________________ 3. ____________________ 4. ____________________

Name ______________________________

Date ____________________ Period ____________

Activity 44-3: Evaluating Learning

Evaluate your learning by filling in the information requested on this page. Complete the final section to evaluate your skill mastery.

1. Briefly explain how sergers make sewing fast and easy. ______________________

____

2. List four ways sergers differ from conventional machines.

A. ____

B. ____

C. ____

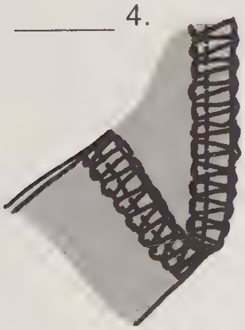
D. ____

3. In your own words, explain the function of each of the following serger machine parts:

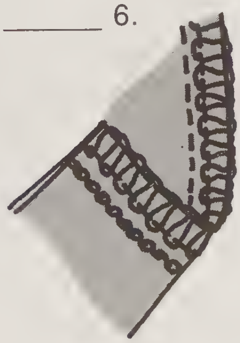
Part	Function
Loopers	
Stitch finger	
Knives	
Differential feed regulator	

Match the following serger stitches with their names.

_____ 4.



_____ 6.



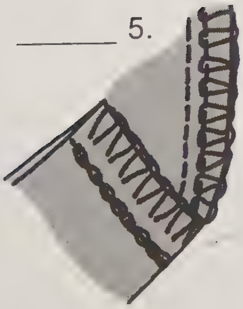
A. 2-thread overedge stitch

B. 5-thread stitch

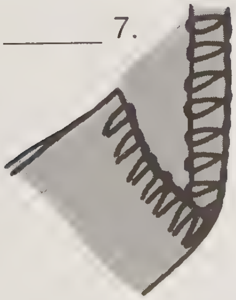
C. 3/4-thread overlock stitch

D. 4-thread stitch

_____ 5.



_____ 7.



(Continued)

Name ____________________

8. List three factors to consider when selecting thread.

A. ____________________
B. ____________________
C. ____________________

9. List three steps you would take if your serger was not forming stitches correctly.

A. ____________________
B. ____________________
C. ____________________

10. Answer the following questions by circling *yes* or *no*.

A.	Do you feel you know how to thread the serger?	yes	no
B.	Do you feel you know how to thread the serger using the easy-threading method?	yes	no
C.	Do you know how to replace serger needle(s)?	yes	no
D.	Do you know how to adjust the tension regulators?	yes	no
E.	Do you know what to do when the serger stitches incorrectly?	yes	no
F.	Do you know how to clean and care for the serger?	yes	no
G.	Do you feel comfortable performing most of the techniques presented in this lesson?	yes	no

If the answer is no, circle any of the following techniques you feel uncomfortable doing.

machine stitching
resuming stitching when threads break
following stitching guidelines
adjusting the stitch length
adjusting the stitch width
adjusting the differential feed regulator
securing seam ends
serging curves
turning outside corners
turning inside corners
serging in a circle
ripping out stitching

Lesson 45

Serger Construction Techniques

Objectives

This lesson will help you to

- explain how using sergers affects pattern choice and fabric selection.
- identify areas on a sewing project where serging would be appropriate.
- determine construction order of a serged project.
- explain how using sergers changes conventional construction techniques.
- demonstrate serger construction techniques, such as seaming, gathering, hemming, and decorative stitching.

Words to Know

single-layer construction
flat construction
narrow double-stitched seam
serged/topstitched seam
decorative lapped seam
flatlocked seam
mock flat-felled seam
mock French seam
stabilize
finished-edge hem
narrow turned-under hem
flatlocked hem
mock band hem
narrow unrolled hem
narrow rolled hem
ribbon-finished hem
lettuce-leaf hem
cover stitch hem

Gathering Information

This lesson presents important information and sewing techniques that will help you construct a project using a serger. As you read through the information, you will discover that sewing with a serger is very different from using a conventional machine. Don't worry! You will soon master the skills required to construct a project using a serger.

Selecting a Pattern

Any pattern can be sewn faster and more professionally with a serger. However, because sergers trim seam allowances as they stitch, they are best used to construct projects that do not require precise fitting. Select patterns for loose, unfitted garments, or garments where fit is achieved through the stretch of the fabric. Seams do not need to lie flat, and fitting adjustments are generally not as important for these types of garments.

Making Fabric Choices

Most fabric is suitable for serging. In fact, fabrics that would create stitching problems on conventional machines can be easily stitched on sergers. These include slippery, lightweight, and stretchy fabrics. Knits and stretch wovens are especially suitable for serging because sergers form stitches that stretch with the fabric.

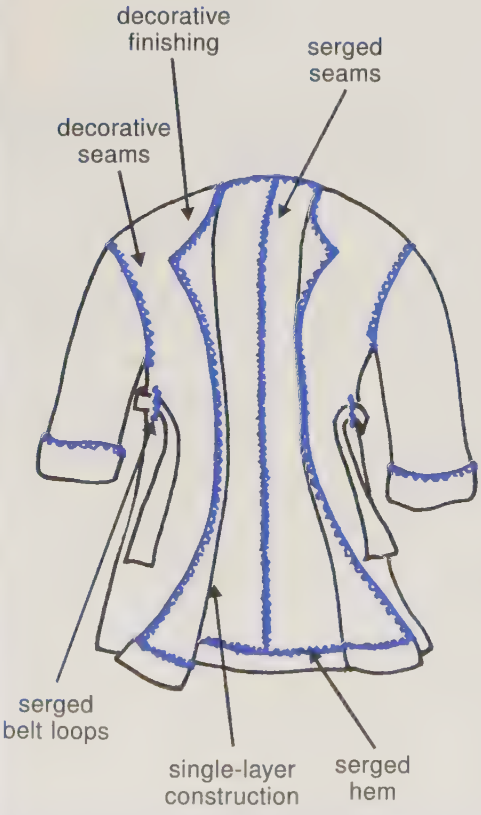
When you select fabric, consider its weight. Quite often serged projects are constructed using ***single-layer construction***. This means interfacings, facings, and undercollars are eliminated. Therefore, the fabric selected must have enough body to maintain its shape with a single layer of fabric. Also, be sure to consider both sides of the fabric. In single-layer construction, cuffs, collars, and lapels may be turned back so that both sides of the fabric are seen.

Deciding Where to Serge

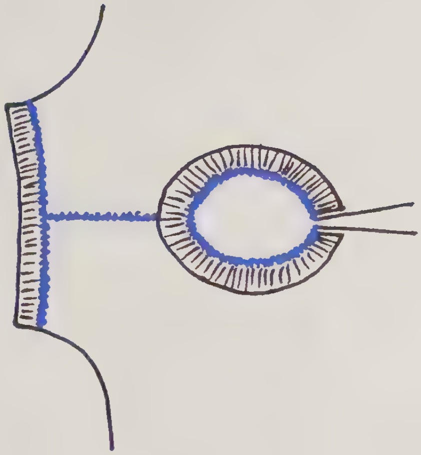
After selecting your pattern and fabric, you must decide where to serge on your project. The pattern instruction sheet may help you make this decision. All major pattern companies offer patterns featuring special instructions for sergers. However, you will have to make the final decision about where to serge. As you become more familiar with what sergers can do, you will find it easier to make these judgments.

Look through your pattern instruction sheet. Decide where the serger can be used to save time. However, be sure you can still achieve the look you want. Ask yourself the following questions:

- Can seams be serged, or only edge finished?
- Can decorative serging be used?
- Can collar, cuff, or lapel facings be eliminated and single-layer construction used?
- Can linings be eliminated by serging seams and edges?
- Can bands, ribbing, elastic, and lace be attached using a serger?
- Can pockets, ties, straps, belt loops, ruffles, and hems be constructed using a serger?



Determining Construction Order



Your decisions about where to serge on your project can affect the construction order. The pattern instruction sheet may give you suggestions for construction order. However, you will have to make the final decision based on the look you want to achieve.

An efficient way to assemble serged tops and dresses is with a sewing method called ***flat construction***. It involves finishing necklines, armseyes, sleeves, and hems before serging underarm and side seams. You will generally work in the following order:

1. Serge one shoulder seam.
2. Finish the neckline.
3. Serge the other shoulder seam.
4. Finish the sleeve cuffs or hems.
5. Serge the underarm and side seams.
6. Hem the garment.

You can also use flat construction to some extent when assembling pants. You will usually work in the following order:

1. Finish seam allowances.
2. Construct tucks or darts.
3. Insert the zipper.
4. Attach the pockets.
5. Sew the side seams, inseams, and crotch seams using a conventional machine.
6. Construct and attach the waistband.
7. Edge finish and hem the pants.

These steps will vary if you decide to serge the pant seams and attach an elastic waistband. Refer to your pattern instruction sheet to help you make important decisions about construction order.

Pattern Adjustments

Make sure garments fit before you serge. Seams are difficult to rip out because sergers trim the seam allowances as they stitch. If you plan to serge a fitted garment, pin seams together first and try the garment on. Make any adjustments necessary to make it fit right. Then serge the garment pieces together.

Transferring Pattern Symbols to the Fabric

Notches and clips are generally used to align fabric layers. In most cases, you will still be able to follow these guides. However, if you are finishing seam edges using a serger, the notches and clips will be trimmed away. In this case, mark notches and clips in the seam allowance using an air erasable or water soluble marking pen, tailor's tacks, or chalk.

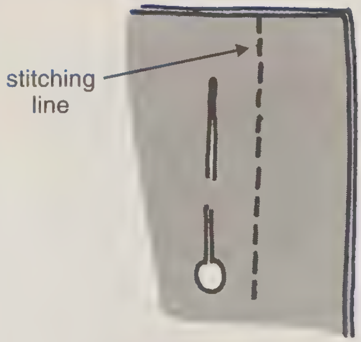
Pressing As You Serge

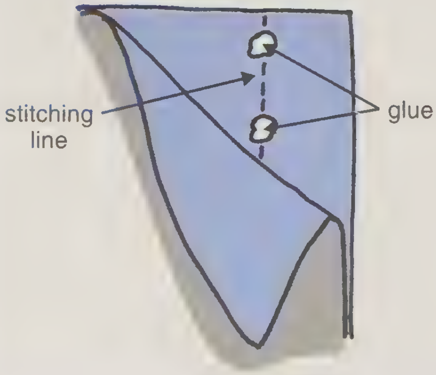
You have already learned how very important pressing is in achieving a professional-looking garment. Pressing is just as important when using a serger. Press seams open or to one side to relax threads and achieve a flat, finished look.

Staystitching

When constructing a serged project, you may still need to staystitch curved and bias cut edges using a conventional machine. This prevents stretching. To conceal the staystitching, use decorative serging. See Lesson 13, "Staystitching," for correct staystitching procedures.

Basting



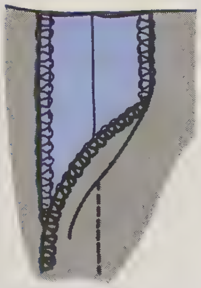


When serging, there is little need to baste fabric layers together. The longer presser foot and feed dogs hold the fabric securely and feed it evenly. Simply match the fabric ends together before beginning to serge.

Occasionally pin basting will be necessary. Use caution! Serging over pins will damage the knives. As you serge, remove all pins before they reach the presser foot. There is less chance of serging over pins if they are placed to the left of the seam, parallel to the seamline. Use pins with large heads to avoid losing them in the fabric.

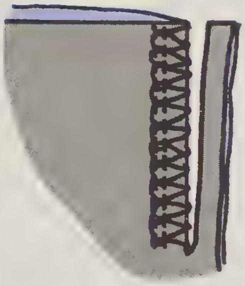
Several other methods of basting may be useful. Small dots of water-soluble glue may be placed two to three inches apart along the seamline of one layer of fabric. Press the second layer to the first and serge. Glue dots may be placed closer together on slippery fabric. Hand basting can also be used to hold layers of very slippery fabrics together.

Finishing Seam Allowances and Edges

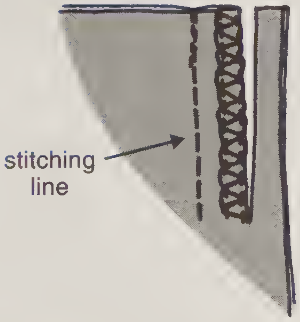


Sometimes you will want to use a serger to finish the edges of facings and hems. Perhaps you want to keep the traditional ⅝-inch seam allowance and then serge the seam edges. To finish edges and seam allowances, use a medium to long stitch length and a medium to wide stitch width. Serge along the fabric edge, being careful not to cut the fabric. There is no need to finish edges that will later be encased, such as necklines and waistlines.

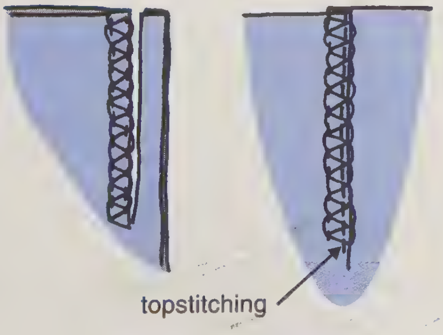
Serging Seams



conventional with serged finish



narrow double-stitched



serged/topstitched

Sergers make seam construction fast and easy. Sergers stitch seams, trim off seam allowances, and finish edges all in one simple step. You can also make creative seams with the serger by using decorative threads. The type of seam you choose will depend on the project design, fabric characteristics, and durability desired. You may want to refer back to Lesson 14, "Seams," to compare serged seams with their conventional counterparts. The pattern instruction sheet may give you suggestions for the type of seam to use. You will need to make decisions based on your fabric and needs.

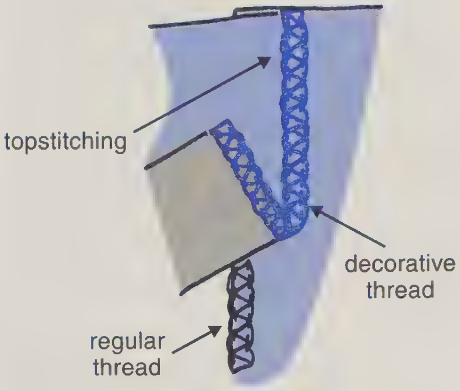
Unless otherwise specified, you will serge most seams along the standard ⅝-inch seamline. The following paragraphs describe a few types of serged seams.

Narrow double-stitched seam. Place fabric with right sides together. Using a conventional machine, straight stitch the seam ⅝ inch from the fabric edge. Using the serger, serge with the needle in the seam allowance ⅛ inch from first line of stitching. Use this seam with knits where moderate stretch is desired and light- to medium-weight wovens. Use this seam where reinforcement is needed, such as crotch seams and the underarm area of set-in sleeves.

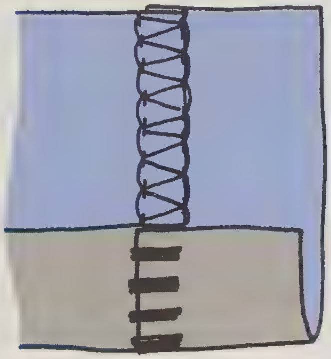
Serged/topstitched seam. With wrong sides of fabric together, serge the seam. If desired, decorative thread may be used. Open the fabric out and press the seam to one side. Using a conventional machine, topstitch the seam to the fabric. Use this seam when decorative stitching is desired on light- to medium-weight fabrics.

Decorative lapped seam. Decide which edge of the seam you wish to appear on the outside of the project. With decorative thread,

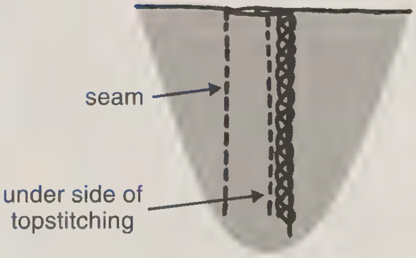
(Continued)



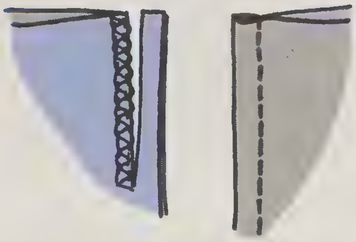
decorative lapped



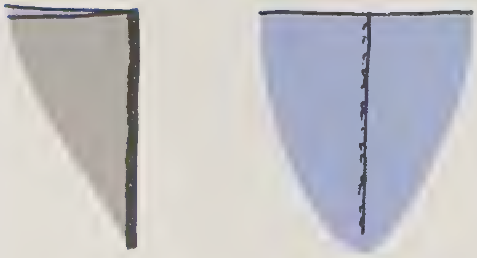
flatlocked



mock flat-felled



French



mock French

serge the overlap edge along the stitching line, trimming away the seam allowance. Finish the underlap edge using regular serger thread. Trim the seam allowances only slightly.

To construct the seam, lap the decorative seam edge over the top of the regular seam edge, matching the ⅝-inch stitching lines. Using a conventional machine, topstitch the seam in place. Fusible web may be used to hold the seam in place while stitching. Use this seam when decorative stitching is desired on medium- to heavyweight fabrics.

Flatlocked seam. To make this seam, begin by adjusting the serger for flatlocking. For a 2-thread stitch, slightly loosen the needle and looper tensions. For a 3-thread stitch, almost completely loosen the needle tension and tighten the lower looper tension. Refer to the machine manual for specific directions.

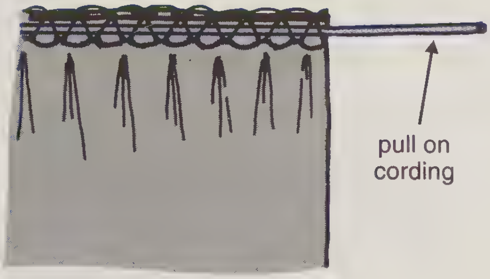
Serge two layers of fabric together. Pull the two layers of fabric apart so the seam allowance lies flat inside the stitching. The appearance of the stitch on the outside of the project will differ. This depends on whether you serge with the right sides or wrong sides of the fabric together. Some sergers may not flatlock. Use this seam when decorative stitching is desired. It is good for many fabric weights. However, it may not be suitable for fabrics that ravel. Test stitch on a fabric swatch to check for desired effect.

Mock flat-felled seam. Decide which direction you want the seam allowance to lie. Serge the edge that will end up being the longest. Stitch the seam using a conventional machine. Trim the unserged seam allowance to ¼ inch. Lay the long serged edge over the unserged edge and topstitch from the right side using a conventional machine. Use this seam on medium to heavy fabrics.

French seam. With fabric pieces wrong sides together, serge a ¼-inch seam, leaving a ⅛-inch seam allowance. Turn the fabric right sides together, encasing the seam and press. Using a conventional machine, straight stitch ¼-inch from the edge. Use this seam on sheer and lightweight fabrics.

Mock French seam. Serge this seam using a narrow rolled hem. Use this seam when serging on sheer fabric.

Gathering with the Serger

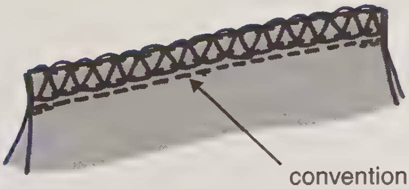


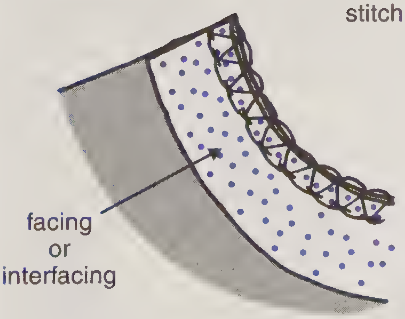
You can use a serger to gather fabric when you need to work in fullness. There are two methods for gathering with sergers.

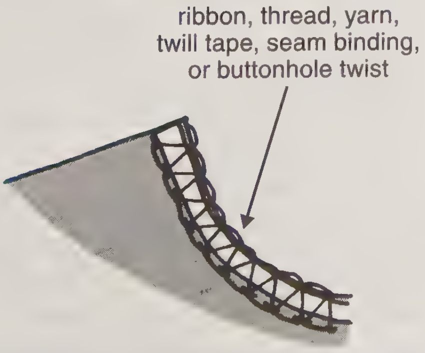
Method 1. Using a 3-thread serger, serge along the gathering line. Gently pull on the needle thread to form gathers. Adjust gathers as desired. Secure gathers according to the pattern instruction sheet.

Method 2. Gathering may also be done by serging over a thin cord. Place the cord under the presser foot and hold it against the knife. Serge over the cord, being careful not to cut the cord or catch it in the stitching. Some sergers have a special cording foot that feeds the cord automatically. To form gathers, secure one end of the cord with a pin and pull on the other end. Adjust gathers as desired. If gathers are secured by stitching, remove the cord.

Stabilizing Seams and Edges






ribbon, thread, yarn, twill tape, seam binding, or buttonhole twist

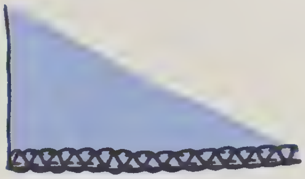
When using a serger to construct projects, there will be occasions when seams and edges need ***stabilizing***. This means adding extra strength to areas that receive a lot of stress during wear. Such areas include pant crotch seams, shoulder and neckline seams, and front edges. They need extra strength. This is especially important when using loosely woven or very stretchy fabrics. There are three basic methods for stabilizing seams and edges.

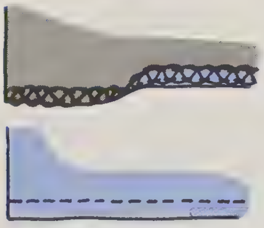
Method 1. Straight stitch the seam using a conventional machine. Then serge the seam, stitching close to the first row of stitching.

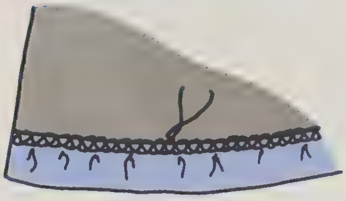
Method 2. Serge interfacing or a facing to the project.

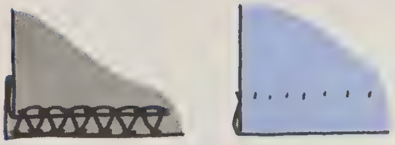
Method 3. Serge over trims, such as ribbon, thread, yarn, buttonhole twist and various tapes (including hem, twill, and sheer stay). Be careful not to cut the fabric and trims you are serging over. To prevent thread, yarn, or buttonhole twist from getting cut, lay it through and over, rather than under the presser foot. Using a cording foot or a tape sewing foot can be helpful.

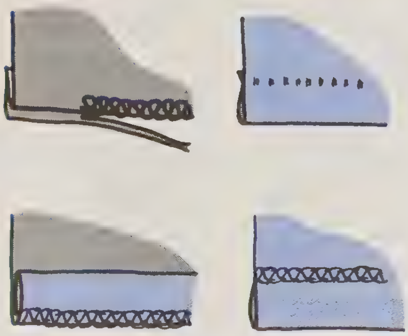
Constructing Hems

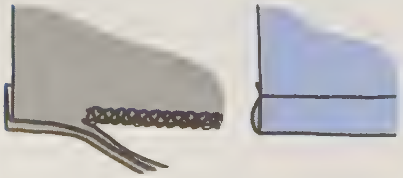

finished-edge


narrow turned-under


eased


blind


flatlocked


mock band

There are many ways to construct hems using a serger. The method you select will depend on the project design and fabric weight. The following paragraphs discuss various types of serged hems.

Finished-edge hem. Serge the fabric edge using a medium stitch width and length. Use this when a very flat hem is desired. It is excellent for hemming tuck-in blouses. A decorative thread may be used to add detail to the hem edge.

Narrow turned-under hem. Serge the fabric edge as for a finished-edge hem. Then turn the hem up ¼ inch and edge stitch or topstitch in place, using a conventional machine. Use this hem when a flat, narrow hem is desired.

Eased hem. Loosen the needle thread tension and serge the hem edge. Pull on the needle thread to ease in fabric fullness. Following the directions for preparing an eased hem in Lesson 23, "Hemming Methods," turn, press, and hand stitch the hem. This hem is appropriate for wider, turned hems on A-line skirts.

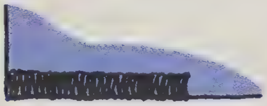
Blind hem. Fold the hem up and back as you would for a conventional blind hem. Serge, barely catching the fold in the stitching. Stitching may show on the outside of the project. A blind hem foot will make serging this hem easier. Use this hem when you want a quick, machine-stitched hem. Practice on a fabric swatch before serging on your project.

Flatlocked hem. Fold the hem up and back as when making a blind hem. Flatlock with the needle running just on top of the fold. Be careful not to cut the fold. When finished, turn down the hem to flatten the stitches and press. The smaller the needle bite, the less the stitches will show. Use this hem when decorative stitching is desired. It works best on a straight or moderately curved hem.

The reverse side of the stitches can appear on the right side of the fabric. Fold up the hem twice to the wrong side and press lightly. From the right side, flatlock along the second fold. Be careful not to cut the fold. Turn the hem down and flatten the stitches. Press.

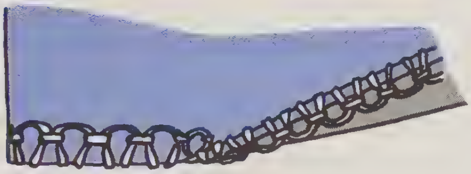
Mock band hem. Fold the hem up and back. Serge, barely cutting off the fold. Use this hem when a decorative band effect is desired. It can also be used to form casings for elastic.

(Continued)



narrow unrolled

Narrow unrolled hem. Serge, using a 2- or 3-thread stitch to make this hem. Use a narrow to medium stitch width and a short stitch length. Decorative thread may be used. This hem is excellent for heavier fabrics where a less bulky, flat edge is desired. It is frequently used to finish the edges on place mats, tablecloths, ruffles, and scarves.

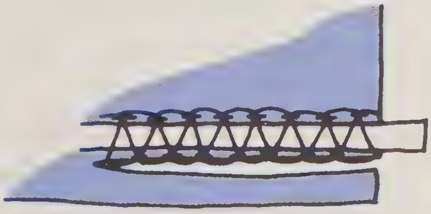


narrow rolled

Narrow rolled hem. This hem is made using an unbalanced stitch. As stitches are formed, the fabric edge is rolled under. Tension adjustments are necessary to make a rolled hem. Check the machine manual to see if your serger will make this stitch and for specific settings. Some sergers also require a special foot or throat plate with a narrow stitch finger.

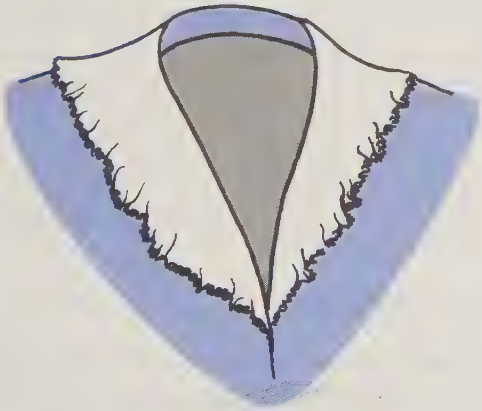
A very short stitch length will produce a satin stitch edge. A little longer stitch produces a picot or scalloped edge. Be sure to do a test sample.

The narrow rolled hem is a very versatile and durable hem. It is often found on ruffles, scarves, circular hems, tablecloths, and napkins. This hemming method is especially useful on delicate, sheer fabrics. It may not be appropriate for loosely woven fabrics because it may pull out.



ribbon-finished

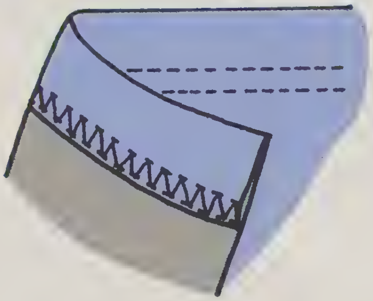
Ribbon-finished hem. To make this hem, use $\frac{1}{16}$- to $\frac{1}{4}$-inch satin or grosgrain ribbon. Place the ribbon on the right side of the fabric next to the hem foldline. Adjust the stitch width slightly wider than ribbon. Adjust the stitch length so the ribbon will show between stitches. Serge over the ribbon, cutting off the hem allowance. Be careful not to cut the ribbon. Use this hem when a decorative effect is desired. It is especially good for lingerie.



lettuce-leaf

Lettuce-leaf hem. Serge the fabric edge using a rolled or unrolled satin stitch edge. The more stretch the fabric has and the shorter the stitch length, the more the fabric will ruffle. Increasing the pressure on the presser foot will cause the fabric to ruffle more. You may also gently stretch the fabric as it is being stitched to increase ruffling. This method can be used to hem dresses, skirts, scarves, ruffles, collars, sleeves, belts, or other project areas where ruffling is desired.

(Continued)



cover stitch

Cover stitch hem. This hem is made by using the cover stitch, which features a twin- or triple-needle stitch on one side and an overlock stitch on the other. (You may have the overlock stitch appear on both sides of the fabric.) Turn up the hem the desired width and stitch along the hem edge. This stitch provides a great deal of stretch, making it perfect for the hems of knit garments. Not all sergers are capable of making this stitch.

Decorative Serging

Many decorative stitches can be created using the serger. Keep the following tips in mind when doing decorative serging.

- Try mixing thread colors and textures to find the combinations you like best. See Lesson 44, "Operating the Serger Machine," for the types of thread that can be used for decorative serging. Stitching is more visible when you use contrasting, shiny, or unusual threads with a shortened stitch length.
- Determine if both sides of the stitch will be visible. Then decide in which needles and loopers the decorative thread should be placed. Use decorative threads in the loopers as often as possible for easier threading. Decorative threads can be used in combination with regular threads.
- Adjust the width, length, tension, and pressure of the stitch. Even small adjustments can make big changes in the look of a finished product. When serging with thicker decorative threads, you will almost always need to use a longer stitch length and loosen the tension. Yarn and ribbon may work better when not threaded through the tension regulators at all. Always do a test sample.
- Hand wind decorative yarn or ribbon onto a spool or arrange it at the back of the serger, so it will not tangle.
- Use sharp, new needles.
- Place the fabric under the presser foot. Hold the thread tail lightly when starting to serge. Serge slowly.
- Use flat construction as much as possible, so the ends of stitching will be attractive.

Name ______________________________

Date ____________________ Period __________

Activity 45-1: Practicing Serger Construction Techniques

This activity will help you practice the serging techniques you have just studied. Complete the exercises below as best you can. Then practice serger construction techniques following the directions. Refer to the information in this lesson as necessary.

1. In the space provided below, briefly explain how using a serger affects the following:

   A. pattern selection ______________________________

   B. fabric selection ______________________________

   C. pattern adjustment ______________________________

   D. transferring pattern symbols ______________________________

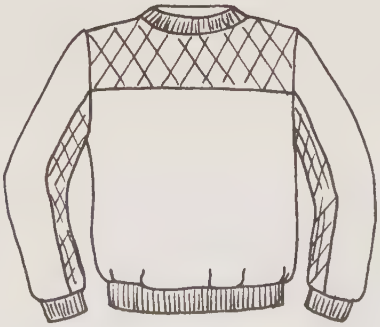
   E. pressing ______________________________

   F. staystitching ______________________________

   G. basting ______________________________

2. For the following garments, indicate the construction order for each detail of the garment. Number the details 1 to 8 in the left-hand column for the knit shirt, and 1 to 10 for the pants. In the right-hand column, indicate the type of machine you would use to construct each detail. Mark *S* for serger or *C* for conventional machine in the spaces provided.

	Order	S/C	Knit Shirt with Ribbing
A.	____	____	Stitch underarm and side seams.
B.	____	____	Stitch front and back together at shoulder seams.
C.	____	____	Attach ribbing to bottom of shirt.
D.	____	____	Stitch front yoke to shirt front and back yoke to shirt back.
E.	____	____	Stitch upper and under sleeve pieces together.
F.	____	____	Stitch sleeves to bodice.
G.	____	____	Attach neck ribbing.
H.	____	____	Attach cuff ribbing.



(Continued)

Name ______________________________

	Order	S/C	Pants
A.	_____	_____	Finish pant hem edges.
B.	_____	_____	Insert zipper.
C.	_____	_____	Construct tucks.
D.	_____	_____	Attach waistband to garment.
E.	_____	_____	Finish the seam allowance edges.
F.	_____	_____	Stitch pockets to pants.
G.	_____	_____	Topstitch waistband.
H.	_____	_____	Stitch inseams, side seams, and around the pockets.
I.	_____	_____	Stitch crotch seam.
J.	_____	_____	Hem pants.

3. List three methods for stabilizing seams and edges when serging.

A. ______________________________

B. ______________________________

C. ______________________________

Practicing Serging

Practice seaming, gathering, and hemming using the serger. Your teacher will give you additional instructions regarding which seams and hems you are to make. He or she will also tell you how to go about doing them.

Supplies needed:

- serger
- conventional machine
- thread
- shears
- pins
- fabric scraps
- decorative thread
- water-soluble glue

Practicing seaming For each seam, cut two 6- by 2-inch fabric samples. Place them together to form the seam. If using pins, be careful not to serge over them. Also, try using water-soluble glue to hold the fabric layers together. Use decorative thread where appropriate.	Choose from these seams: conventional seam with serged finish narrow double-stitched seam serged/topstitched seam decorative lapped seam flatlocked seam mock flat-felled seam French seam mock French seam
Practicing gathering Check the machine manual to see how to gather with the serger you are using.	Follow the directions in this lesson for gathering over cording.
Practicing hemming For each hem, cut one 6- by 4-inch fabric sample. Use decorative thread when appropriate.	Choose from these hems: finished-edge hem narrow turned-under hem eased hem blind hem flatlocked hem mock band hem narrow unrolled hem narrow rolled hem ribbon-finished hem lettuce-leaf hem

Name ____________________

Date ____________ Period ________

Activity 45-2: Evaluating Learning

Evaluate the samples you prepared in Activity 45-1. In the spaces provided on the form, fill in the seams and hems you constructed. Rate your samples from 1 to 5, 1 being poorly done and 5 being very well done. After rating your samples, complete the exercises below. Turn in the samples and evaluation form to your teacher. Be prepared to discuss the results of your evaluation.

	Seam or Hem Types											
Correct procedure followed.												
Correct tension for type of stitch.												
Serging free from puckers and skipped or broken stitches.												
Correct stitch length and width for type of stitch.												
Decorative thread used for appropriate seams or hems.												
Sample looks attractive on both sides.												
Correct seam or hem allowance trimmed away.												
Conventional machine stitching is straight, at an even distance from edge.												

1. In your own words, explain the following terms:

   A. flat construction ____________________

   B. single-layer construction ____________________

Circle *T* if the statement is true or *F* if the statement is false.

T F 2. Serged seams are best for fitted garments.
T F 3. Lightweight fabrics are best for single-layer construction.
T F 4. Make sure a garment fits before serging the seams.
T F 5. Fabric must be selected carefully for a serged garment, as most is not suitable for this sewing method.
T F 6. Knits are especially suitable for serging.
T F 7. When serging seam allowances, it is necessary to mark notches using clips.
T F 8. Pressing is not as important when serging and can often be skipped.
T F 9. Curves and bias-cut edges of garments need to be staystitched when using a serger.
T F 10. Pins should be placed parallel and to the left of the seam allowance when serging.

Name

Date Period

Activity 45-3: Planning a Serged Project

To help you plan a serged project, complete the exercises below. Then answer the following questions. Your teacher may ask you to complete other project planning worksheets included in Unit 5.

Briefly evaluate your pattern in terms of its suitability for serger construction.

Sketch your project below. In the correct order, list the steps you will follow to construct your garment. Indicate the type of machine you would use for each step. Mark *S* for serger or *C* for conventional machine in the left-hand column.

Sketch

	S/C	**Construction Steps**
A.		
B.		
C.		
D.		
E.		
F.		
G.		
H.		
I.		
J.		

1. What type of serged seams will you use on your project? Where will they be used?

2. Do you need to stabilize the serged edges on your project? Which method will you use?

(Continued)

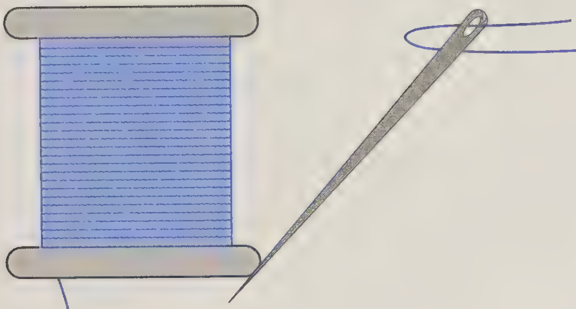
Name ________________________________

3. Do you plan to use the serger for edge finishing? What areas of the project do you plan to edge finish?

4. Do you plan to use decorative stitching? Where do you plan to do so?

5. Which hemming methods do you plan to use?

notes



Lesson 46 Constructing a Serged Project

Objectives

This lesson will help you construct a project using a serger. You will apply the following, previously acquired skills:

Unit 3: Learning the Basics (Lessons 1-23)
Unit 6: Constructing the Project (Lessons 24-43)
Lesson 44: Operating the Serger Machine
Lesson 45: Serger Construction Techniques

Helps for Success

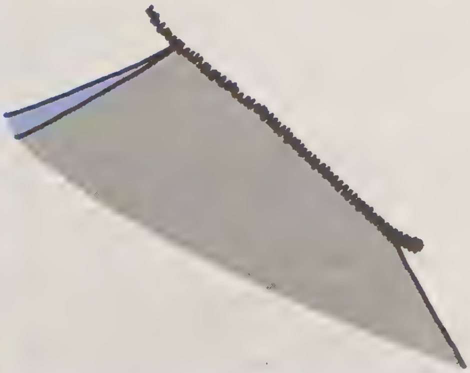
Constructing methods using a serger are quite different than those used when sewing on a conventional machine. The suggestions given in this lesson will help you construct your project. Read them carefully. Also read the pattern instruction sheet as it may offer additional ideas for serging your project.

In Unit 8, you will find two evaluation forms for the serged project. Read these over before beginning your project. This will help you identify the criteria you should strive to meet. Complete the forms after you finish your project.

Continuous Stitching

To save time serging, try serging several seams without stopping in between. Do not stop to cut the chain or lift the presser foot. Simply serge one seam, chain off 4 inches, and serge another. Serge as many seams as you need. After you have finished, cut the chains between seams and secure the ends if necessary.

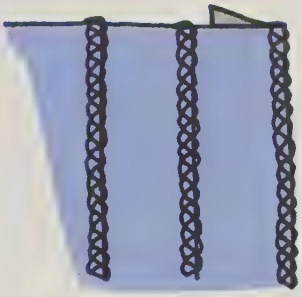
Constructing Darts



Darts may be constructed using the serger. Mark and shape the darts according to the directions given in Lesson 24, "Constructing Darts, Tucks, and Pleats." Pinning is not necessary. If desired, hand baste or use water-soluble glue instead.

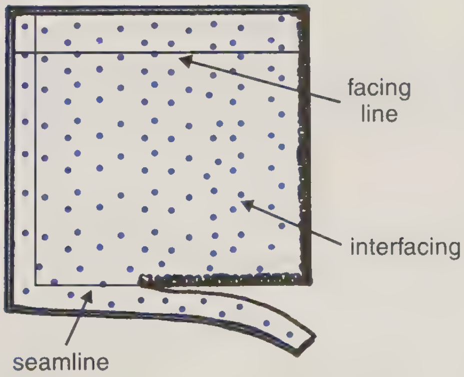
Serge the dart from the wide end to the narrow end. The serger knives will trim the dart as you serge. To form the point of the dart, serge off the fabric edge, tapering to a point. Secure stitching at the dart point. Press.

Constructing Decorative Tucks



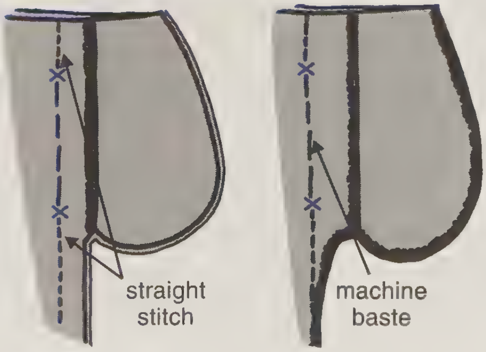
Sergers can be used to make fast and easy decorative tucks. Decorative tucks can sometimes be constructed on fabric before pattern pieces are cut out. To make tucks, begin by pressing the tucks in the fabric. Adjust the stitch width for the desired tuck size. Then serge along each fold, being careful not to cut the fabric. Knives may be disengaged if desired. Serge all tucks in the same direction so stitching will appear the same. If desired, use decorative thread in the looper that will be most visible. After the tucks are made, lay pattern pieces over the tucked fabric and cut out as directed.

Constructing Patch Pockets



Begin by fusing interfacing to the wrong side of the pocket for reinforcement. Serge along the facing line and seamline, trimming away the seam allowance and facing. Neatly secure the ends. Align the pocket with the placement markings on the garment. Use a conventional machine to straight stitch the pocket in place.

Constructing In-Seam Pockets

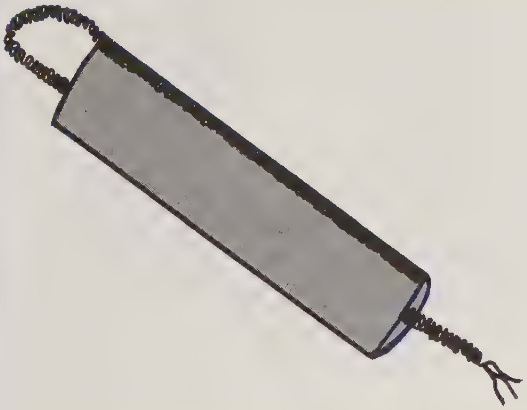


Follow the pattern instruction sheet for basic pocket construction information. Begin by serging the pocket pieces to the garment, Using a conventional machine, straight stitch from the waistline to the first dot. Machine baste to the lower dot. Using a regular stitch length, continue straight stitching several inches below the second dot. Serge the side seam from the lower edge of the garment up to the straight stitching and around the pocket, as shown. Fold the pocket and seam toward the front. Serge the pocket in place along the waistline. Remove basting.

Constructing Ties and Straps

Without any fabric under the presser foot, stitch a chain 6 inches longer than the strap. Do not cut the chain. Fold the right side of the fabric around the chain, matching edges. Serge edges together, being sure not to catch the

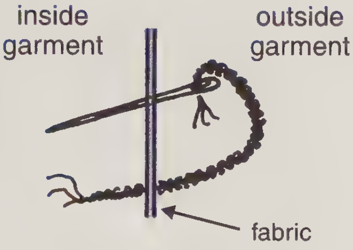
(Continued)

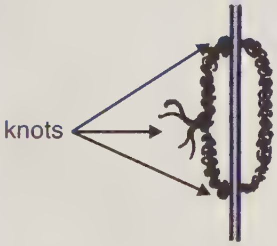


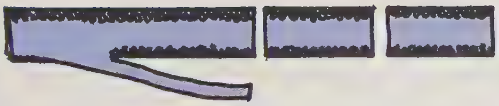
chain in the stitching. The chain should be encased in the fabric. To turn the strap or tie, pull on the chain.

When making spaghetti straps, cut woven fabrics on the bias and knits with the stretch of the fabric. This will provide greater stretch, making them easier to turn and more comfortable to wear. Use a narrow rolled hem for narrow straps. The stitch will act as stuffing for the strap.

Constructing Belt Loops





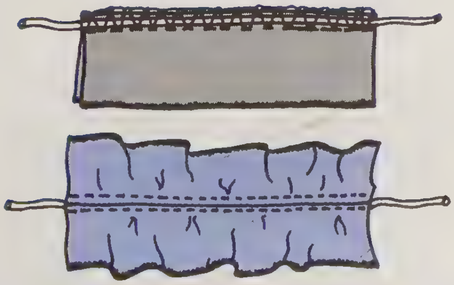


Quick and easy belt loops can be made with the serger. The following paragraphs describe two methods.

Method 1. To make thread belt loops, make a thread chain using the serger. Use top stitching thread in the needles and loopers for added strength. Adjust the machine for a short stitch length and a narrow stitch width. After chaining off enough for all your belt loops, cut the chain into the length needed. Then sew the chains into the side seams of your garment. You can also thread the chains in a large-eye or self-threading needle and hand stitch them to the garment. To do this, push the needle through the garment at the desired location from inside to outside to back inside again. Knot as shown.

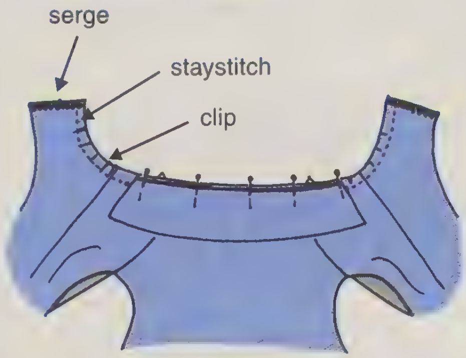
Method 2. To make fabric belt loops, use heavy single-layered fabrics. If working with lightweight fabric, use a double layer of fabric. Experiment to determine the best belt loop size and stitch width. Serge fabric edges. Then cut the strip into desired lengths. The narrower the belt loop, the narrower the stitching should be.

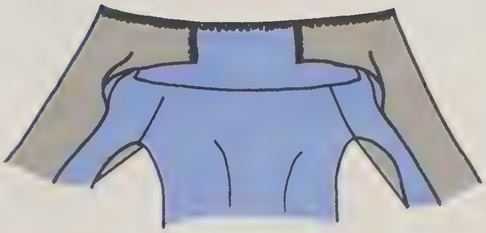
Constructing Center-Gathered Ruffles

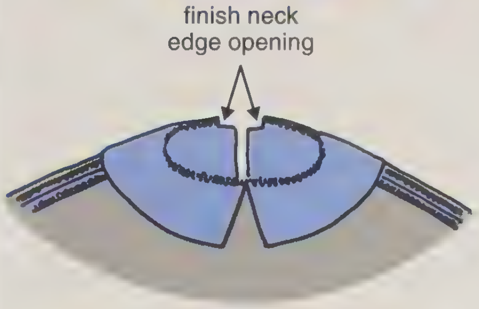


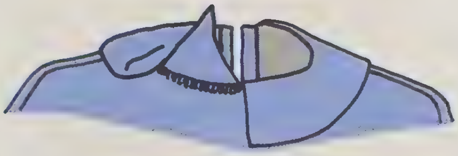
There is an easy way to make center-gathered ruffles using the serger. Hem the ruffle edges using a narrow rolled hem. Fold the ruffle in half, right sides together. Place cording along the folded edge. Serge over the cording, being sure not to cut the cord or fabric. Pull on the cording to gather and adjust the ruffle. Using a conventional machine, stitch the ruffle to the garment using a straight stitch or narrow zigzag stitch.

Attaching Collars









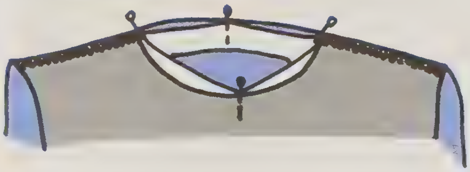
There are numerous ways to attach collars to garments. Directions for attaching two types of collars are given below.

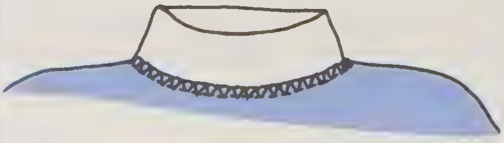
Convertible collar. Prepare the collar following the pattern instruction sheet. Staystitch the neck edge and clip to stitching. Then serge the facing ends. Correctly position the collar on the garment neck edge, matching pattern symbols. Ease the collar to fit the neck edge and pin in place. Fold the facing ends back over the collar and pin.

Serge the neckline seam, removing pins as you come to them to avoid serging over them. Turn the facing right side out and press. If corners are too bulky, they may be reinforced with conventional straight stitching, and then trimmed and graded. To keep the neckline seam in place, it may be stitched to the bodice from shoulder seam to shoulder seam using a conventional machine. The collar will cover this row of stitching when the garment is worn.

Peter Pan collar. Prepare the collar and finish the neck edge opening according to the pattern instruction sheet. Then pin the right side of the collar to the wrong side of the neck edge, matching pattern symbols. Serge the collar to the garment. Flip the collar over to the right side of the garment. The serged seam will be under the collar.

Attaching Ribbing

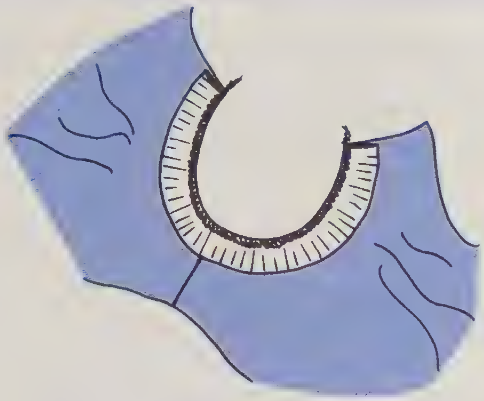




Serge the garment shoulder or sleeve seams together. Then serge the ribbing ends together. Pin the ribbing to the garment neck or sleeve edge. Place the garment under the presser foot, ribbing side up. Serge, stretching the ribbing as needed to fit the garment opening.

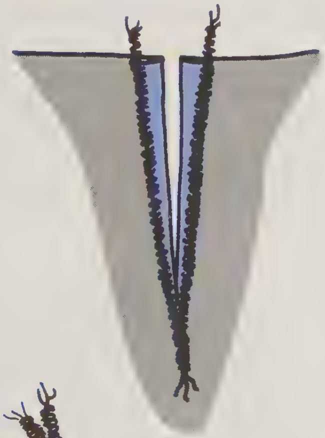
For a decorative effect, place the right sides of the ribbing and garment together and flatlock. The stitching will appear on the right side of the garment.

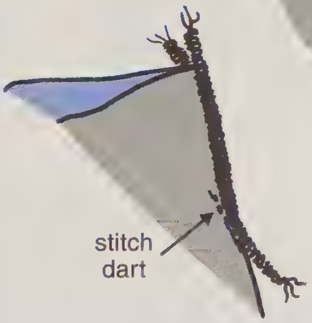
(Continued)



Ribbing can also be attached to garments using flat construction. Serge one shoulder or sleeve seam together. Attach the ribbing. Then serge the other shoulder or sleeve seam, stitching through the ribbing as well.

Constructing Sleeve Openings



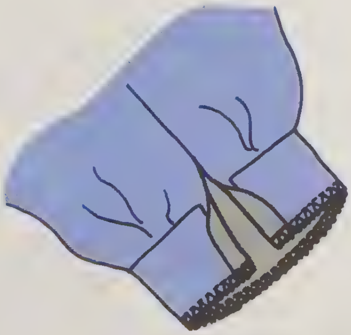


Mark the location of the sleeve placket on your fabric. Make sure you have done so correctly. If you make a mistake, the opening may appear on the front of the sleeve rather than the back.

Slash the center of the placket opening to the point. Carefully serge the opening edge, without trimming. When the knife reaches the corner, lower the needle into the fabric and lift the presser foot. Straighten the fabric. A pleat will form to the left. Continue serging, being careful not to stitch a tuck in the corner. Practice this technique before serging on your garment. Also review “Turning Inside Corners” in Lesson 44.

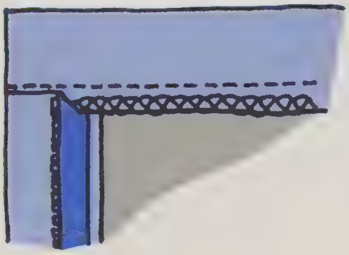
Finally, place the right side of the sleeve placket together and straight stitch a small dart at the end of the placket, using a conventional machine. This is done to keep the placket turned to the underside of the garment. Press as shown.

Attaching Cuffs



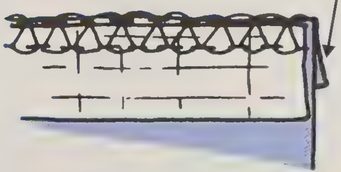
Construct the cuff according to the pattern instruction sheet. The cuff may also be constructed by placing the pieces together and serging along the ends and bottom. When wrong sides are placed together, the stitching will appear on the outside of the cuff as decorative stitching. If you choose to have stitching on the inside of the cuff, place fabric right sides together, serge, turn, and press. Pin the cuff to the sleeve, matching pattern symbols. Be sure the cuff is centered correctly. Fold ¼ to ⅜ inch of the placket opening back over the cuff. Serge through all thicknesses and secure seam ends. Turn and press.

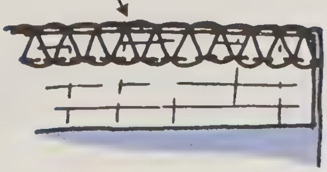
Constructing Waistbands

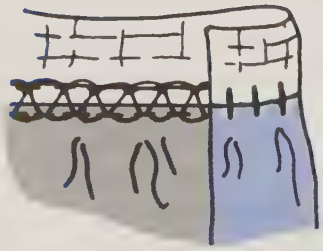


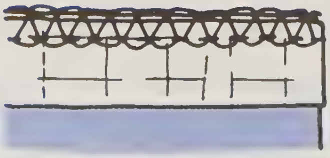
When constructing waistbands, sergers can aid in reducing bulk in the waist seam. Cut the waistband ¼ inch narrower than usual. Serge the long edge that is usually turned under. Using a conventional machine, stitch the unserged edge of the band to the waistline, matching pattern symbols. Fold the band over as directed by the pattern instruction sheet. Do not fold under a seam allowance on the inside of the garment, except right above the zipper. With the right side of the garment up, use a conventional machine to stitch in the ditch formed by the waistline seam.

Applying Elastic









With a serger, applying elastic will be fast and easy. You can apply it so it will never bunch or twist. You will also be able to distribute the fullness where it is needed. Using a special elastic applicator foot can help. This foot stretches the elastic as it is being serged. The amount of stretch is adjustable.

The fastest and easiest way to apply elastic is to use flat construction. When using flat construction, the elastic is applied to the garment before the final side seam is sewn. This eliminates serging elastic in curved areas.

The following paragraphs describe three methods for applying elastic.

Flatlocked elastic. This method requires no casings and adds little bulk. Begin by adjusting the serger to flatlock. If using woven fabric, fold the seam allowance to the wrong side. Fold the seam allowance to the right side to reverse the stitch appearance on the outside of the garment. If using knit fabric, cut off the seam allowance.

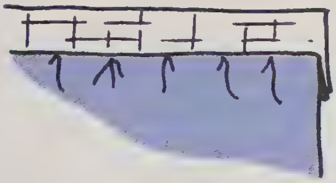
Cut and mark the elastic according to the pattern instruction sheet. Place the elastic along the garment edge. Serge with the elastic side up, being careful not to cut the elastic. After serging, pull the elastic up until the stitches flatten.

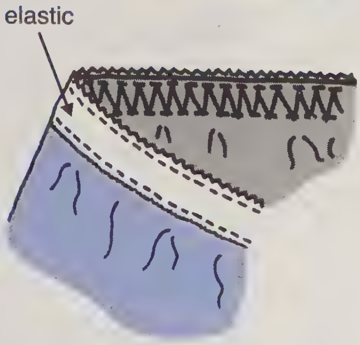
Overlocked elastic. This method is a little bulkier, but can be used with soft elastic and lightweight fabrics. Use a 3- or 3/4-thread stitch. Leave a ¼-inch seam allowance on the garment. Place the elastic on the fabric, right sides

(Continued)

together. Serge the edges, being careful not to cut the elastic. Stretch the elastic in front of the needle as you serge. After serging, pull the elastic up and the seam allowance toward the garment.

Cover stitched elastic. This method is great for soft elastic and lightweight fabrics. Simply stitch the elastic to the fabric using the serger cover stitch. Try using a wide two-needle cover stitch. Not all sergers are capable of making this stitch.





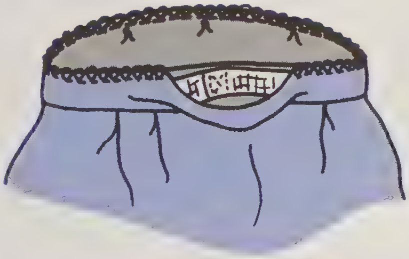
Constructing Elastic Casings

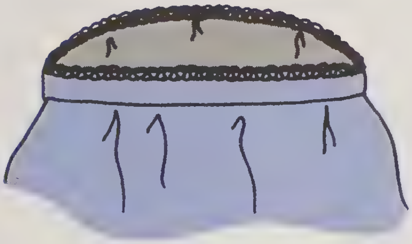
Elastic casings may be used to provide stretch at waistline and sleeve openings. They are also excellent for attaching ¼-inch elastic to the legs of swimwear and aerobic wear. Two methods for constructing elastic casings are described below.

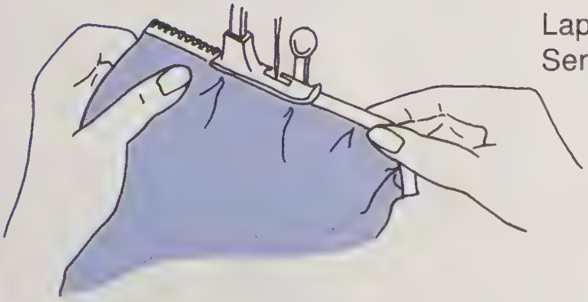
Enclosed elastic bands. Prepare elastic according to the pattern instruction sheet or to fit the body. Try the elastic on to see if it fits comfortably. Cut out the band, making sure it is the appropriate length and ½-inch wider than the elastic.

Sew the band into a circle. Then press in half lengthwise. Using pins as markers, divide the band into quarters. Pin the band to the garment opening, matching quarter marks to seams or other pattern markings. Check pattern instruction sheet. Serge the band to the garment through all layers. Don't forget to remove pins before serging. Leave a 2-inch opening.

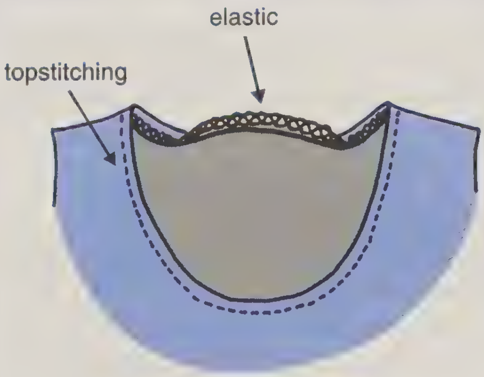
Insert the elastic into the opening and pull it through the casing. Adjust to the desired size. Lap the elastic ends and securely stitch together. Serge the opening closed.







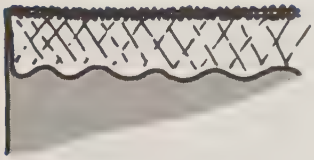
(Continued)



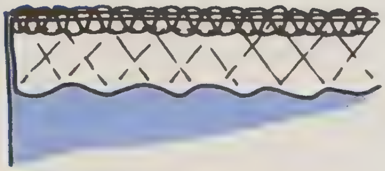
Fold over elastic application. Divide and mark the top of the garment opening and elastic as directed on the pattern instruction sheet. Note that more elastic is usually allowed in the leg back. Adjust the serger to a medium to long stitch length and a medium to wide stitch width. Serge the elastic to the fabric edge on the wrong side of the fabric with the elastic side up. Hold the fabric and elastic behind the foot, stretching the elastic in front of the needle to fit the garment. Fold the fabric over the elastic to form a casing. Using a conventional machine adjusted to a long stitch, topstitch the casing in place ¼ inch to ⅜ inch from the edge.

Attaching Lace

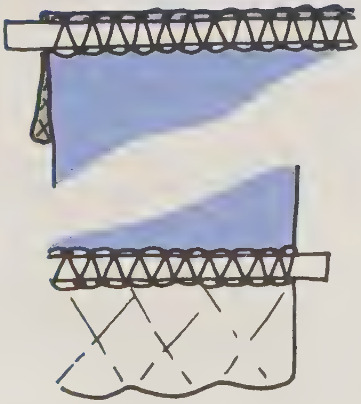
You will find the serger useful for attaching lace to garments. The following paragraphs describe four methods.



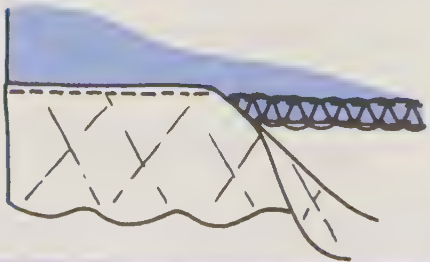
Narrow hemmed lace. Place the lace on the wrong side of the garment. Serge edges together using a narrow unrolled hem.



Flatlocked lace. Place the lace on the fabric with right sides together. If the fabric permits, try using transparent tape to hold the lace in place. Flatlock and then flatten the seam.



Lace with ribbon. Ribbon may be placed over the lace when lace is serged to the fabric. To do this, trim the seam allowance from the garment. Place lace on the fabric edge, wrong sides together. With the fabric right side up, place ⅛-inch ribbon next to the edge. Using a medium stitch width, serge over the ribbon. Be careful not to catch it in the stitching. Pull on the fabric and lace to flatten.



Overlapped lace. Serge the edge of the fabric. On the right side of the fabric, lap the lace ¼ inch over the serged edge. Using a conventional machine, use a straight or narrow zigzag stitch to attach the lace in place.

Unit 8

Evaluating the Project

16
18
19
23
24
8
7
3
2
1

Unit 8

Evaluating the Project

The following forms are used to evaluate your learning from this class. They will help you see your strengths and weaknesses in sewing and serging skills. There are four forms.

Conventional Sewing Project Evaluation

This form may be used to evaluate your finished conventional sewing project. Some of the criteria in this form may have been evaluated as you constructed each portion. Other criteria deal with evaluating the garment as a whole. You, your teacher, or both of you may fill out this form.

Conventional Sewing Performance Evaluation

This form will help you evaluate your learning. It will help you summarize the skills that you have mastered. It will give you an idea of which skills need practice. Finally, the form will show you some skills that you haven't tried yet. This will help you select future sewing projects that will improve your current skills and allow you to practice new ones.

Serged Project Evaluation

This form may be used to evaluate your finished serged project. When you use a serger, you will often use a conventional machine, too. Regardless of the machine used, the same standards of quality apply when evaluating the project. The evaluation form "Conventional Sewing Project Evaluation" and the forms provided in Unit 6 may also be used to evaluate your serged project. Your teacher will tell you which forms to use and how to complete them.

Serger Operation Evaluation

This form will help you evaluate what you have learned about using a serger. It will help you summarize the skills you have mastered. It will give you an idea of additional skills that you may learn. For tasks performed on a conventional machine, you may want to use the "Conventional Sewing Performance Evaluation" form.

Name ______________________________

Date ________________ Period __________

Conventional Sewing Project Evaluation

Project description ______________________________

For each section below, place a check in the column that indicates the proper evaluation.

	Poor	Fair	Good	Excellent	Comments
Overall appearance. Clean, neat, smooth, threads clipped.					
Harmony of pattern and fabric. Fabric texture and weight suited to design. Lining, trim, thread, zipper, and interfacing coordinated.					
Care coordination. All parts of the garment require the same care.					
Cut on-grain. All garment pieces are cut on-grain or on a grain that enhances garment shape.					
Marking. Marks do not show on right side of garment.					
Hand stitching. Appropriate stitch used, neatly done. Knots do not show.					
Machine stitching. Appropriate stitch length is used, stitching is straight. Topstitching is an even distance from the edge.					
Pressing. Shows evidence of being pressed as sewn. No press marks or wrinkles.					
Darts. Points tapered, smooth, and securely fastened at ends. Darts pressed down or toward center of garment.					
Seams. Appropriate stitch length used. Seam allowances are proper width and are pressed flat and smooth. Fabric edges meet at seam ends. Plaids match. Stress seams (such as crotch) properly reinforced.					
Seam finishes. Proper finish for fabric, neatly done.					

(Continued)

Name ______________________________

	Poor	Fair	Good	Excellent	Comments
Pockets (in-seam or patch). Securely stitched with reinforced upper corners. Smooth shape, any topstitching neatly done.					
Zipper. Appropriate method used. Stitching straight, no gap at top edge. Zipper is flat, smooth, well covered. Slides easily.					
Neck facing. Facing edge finished appropriately for fabric. Facing tacked at shoulders and zipper tape, smoothly shaped.					
Armhole facings. Facing edge finished appropriately for fabric. Facings tacked at seams, smoothly shaped.					
Collars and lapels. Free from bulk, smoothly shaped, neck seam clipped and trimmed. Interfacing used.					
Sleeves. Evenly gathered or eased, underarm seam reinforced.					
Cuffs. Sleeve evenly gathered to cuff, opening correctly done. Cuffs interfaced, even in width, neatly hemmed.					
Waistband. Any gathers or tucks joined evenly. Band uniform in width, free from bulk, interfaced, laps properly.					
Casings. Even in width, edge finished appropriately.					
Lining. Neatly attached to garment, fits garment. Ease allowed at hems if attached to garment.					
Hems. Uniform width, secure, flat, inconspicuous. Appropriate method used, fullness evenly distributed. Hand sewing neatly done.					
Buttonholes, buttons, and fasteners. Correctly placed, secure, appropriate for design. Buttons have shank if needed. Stitching neat, double thread used.					
Other (pleats, trims, etc.). Smooth, flat, free from bulk. Durable, neat, correctly done.					
Fit. Length appropriate, crotch length correct. Shoulders, waist, hips fit properly. Darts end at correct point.					

Name ______________________________

Date ________________ Period __________

Conventional Sewing Performance Evaluation

Rank yourself from 1 to 10 as to how well you feel you can perform the following tasks. When ranking, 1 represents little skill and 10 represents high performance.

Fabrics

	Select appropriate fabric, pattern, notions, etc.
	Check care information.
	Make fabric grain perfect.
	Preshrink fabric.

Pattern

	Select pattern based on design principles and wardrobe plan.
	Take accurate body measurements.
	Select correct size and figure type.
	Make needed alterations.
	Read instruction sheet.
	Read pattern symbols.

Equipment

	Thread the machine.
	Replace machine needle.
	Adjust stitch tension.
	Adjust stitch length.
	Straight stitch.
	Zigzag stitch.
	Serge (pine) stitch.
	Blind hem stitch.
	Stretch knit stitch.
	Use various decorative stitches.
	Follow stitching guidelines.
	Backstitch.
	Machine embroider.
	Turn a square corner.
	Use small sewing equipment.
	Use pressing equipment.

Basic Techniques

	Lay out and pin pattern.
	Cut out pattern.
	Mark with chalk, tailor's tacks, and tracing paper.
	Press.
	Staystitch.
	Construct plain seams.
	Clip seams.
	Trim and grade seams.
	Finish seams.

Basic Techniques *(Continued)*

	Construct flat-felled seams, French seams, slot seams, etc.
	Understitch.
	Clean finish.
	Gather and ease.
	Apply interfacing.
	Topstitch.
	Hand stitch.
	Construct darts.
	Construct tucks.
	Construct pleats.
	Construct patch pockets.
	Construct in-seam pockets.
	Construct ties.
	Insert a centered and a lapped zipper.
	Insert an invisible zipper.
	Construct a placket opening.
	Apply a facing.
	Construct a yoke.
	Construct a collar.
	Construct raglan sleeves.
	Construct set-in sleeves.
	Construct sleeve openings.
	Construct cuffs.
	Construct rolled cuffs.
	Construct a waistband.
	Construct casings.
	Sew buttonholes and button loops.
	Apply stretch lace and nonstretch hem tape.
	Finish hems.
	Attach snaps, hooks, eyes, buttons.
	Sew belt loops.
	Sew knit ribbing.

Advanced Techniques

	Sew appliqués.
	Use specialty fabrics, such as furs, lace, sheers, vinyl.
	Use border and directional prints, plaids, stripes.
	Use piping.
	Use stretch and napped fabrics.
	Construct linings and underlinings.

Name ______________________________

Date ____________________ Period __________

Serged Project Evaluation

Project description ____

For each section below, place a check in the column that indicates the proper evaluation.

	Poor	Fair	Good	Excellent	Comments
Pattern and fabric. Appropriate for a serged project. Serger used to fullest advantage in constructing the project.					
Thread. Type appropriate for task and decorative effect desired. Color matches or blends.					
Stitching. Serge stitch appropriate for fabric and purpose. Tension balanced. Stitches correct length and width. Serging free from puckers. No skipped or broken stitches.					
Decorative stitching. Enhances appearance of project. Correctly and neatly done. Thread choice enhances stitch and project.					
Ending stitching. Stitching secured at seam ends. Appropriate method used.					
Corners. Neatly turned. Appropriate method used. Correctly done.					
Edges and seams. Stabilized when necessary. Appropriate method used. Correctly done.					
Ribbing. Attached correctly using appropriate method. Fullness evenly distributed.					
Elastic. Applied correctly using appropriate method. Fullness distributed correctly.					
Lace. Attached correctly using appropriate method. Ribbon, if used, not caught in stitching.					

Name ______________________________

Date __________________ Period __________

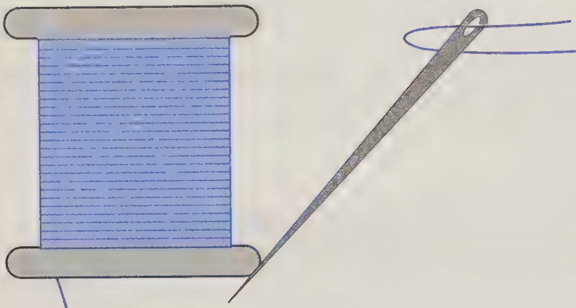
Serger Operation Evaluation

Rank yourself from 1 to 10 as to how well you feel you can perform the following tasks. When ranking, 1 represents little skill and 10 represents high performance.

	Pattern/Fabric
	Select appropriate pattern/fabric.
	Decide where to serge on project.
	Determine construction order.
	Using the Serger
	Replace machine needle(s).
	Change knives.
	Thread the serger.
	Remove thread from stitch finger.
	Use easy-threading method.
	Resume stitching when threads break.
	Machine stitch.
	End stitching by cutting chain with knife.
	Secure chain at seam ends.
	Adjust the stitch tension.
	Adjust the stitch length.
	Adjust the stitch width.
	Adjust the differential feed regulator.
	Adjust the pressure regulator.
	Follow stitching guidelines.
	Serge curves.
	Turn outside corners.
	Turn inside corners.
	Serge circles.
	Flatlock.
	Use rolled hem stitch.
	Care for serger.
	Solve machine problems.
	Construction Techniques
	Continuous stitch.
	Construct narrow double-stitched seam.
	Construct serged/topstitched seam.
	Construct decorative lapped seam.
	Construct flatlocked seam.
	Construct mock flat-felled seam.

	Construction Techniques *(Continued)*
	Construct French seam.
	Construct mock French seam.
	Construct gathers.
	Stabilize edges and seams.
	Construct finished-edge hem.
	Construct narrow turned-under hem.
	Construct eased hem.
	Construct blind hem.
	Construct flatlocked hem.
	Construct mock band hem.
	Construct narrow unrolled hem.
	Construct narrow rolled hem.
	Construct ribbon-finished hem.
	Construct lettuce-leaf hem.
	Construct cover stitch hem.
	Use decorative stitching.
	Construct darts.
	Construct decorative tucks.
	Construct patch pockets.
	Construct in-seam pockets.
	Construct ties and straps.
	Construct belt loops.
	Construct center-gathered ruffles.
	Attach convertible collar.
	Attach Peter Pan collar.
	Attach ribbing.
	Construct sleeve openings.
	Attach cuffs.
	Construct waistbands.
	Apply elastic.
	Construct elastic casings.
	Attach lace.
	Serge sheer or slippery fabrics.
	Serge bulky fabrics.
	Serge stretchy fabrics.

notes



Unit 9

Additional Experiences

24
23
16
18
19
8
7
3
2
1

Unit 9

Additional Experiences

This unit is designed to help broaden your sewing knowledge, skill, and creativity. After you master basic sewing techniques, you will find many new challenges waiting for you. Sewing never needs to be dull or boring. It can be as exciting and imaginative as you want to make it. Just let your imagination go and explore the endless variety of projects, fabrics, and techniques available. This unit includes several tools to help you plan and complete additional sewing experiences.

Ideas for Additional Experiences

This form will help you collect ideas from which you can select additional sewing projects. Do not feel limited by the list of suggestions given on the form. The number of sewing projects you could do for additional experiences is almost endless. To help you identify creative sewing projects, your teacher may provide a number of current sewing references. You might also visit local fabric stores and look for ideas and instructions there. Feel free to explore ideas with your teacher.

Planning Additional Experiences

This form will help you plan additional sewing projects to be completed outside the classroom. Begin by selecting a project. On occasion, your teacher may assign a project to give you practice on a skill you have learned in class. At other times, you may wish to do an additional project for extra credit. You may simply choose to do an additional project just for fun. In any case, be sure to discuss your project in advance with your teacher. Your teacher can help you select a project that relates to what is being taught in class.

Evaluating Additional Experiences

This form will help you evaluate projects you have completed outside the classroom. After filling out this form, share it with your teacher. Together, you can use it to target areas where you may still need practice. You can also use this form to help you identify new skills that you have learned.

Lesson 47: Applying Surface Designs

This lesson will introduce you to creative surface design ideas that you can use on additional experience projects. However, you will not find many how-tos in the lesson. It will be your task to learn specific techniques for embellishing sewing projects with the surface designs described. Your teacher may provide additional resources or you may need to explore the topics on your own.

Your teacher can provide you with guidelines and help you choose appropriate surface designs for your sewing projects. Be sure to discuss your plans and the techniques you want to use with your teacher. Include surface designs you want to do on your classroom project on the project planning sheets provided in Unit 5. For projects completed outside class, use the forms described above.

Name ____________________________________

Date ______________________ Period _____________

Ideas for Additional Experiences

Below is a list of ideas for additional sewing experiences. Look through craft magazines and catalogs to find other ideas that interest you. Consider projects that might make use of fabric, clothing, and notions you already have on hand. List your ideas for additional experiences at the bottom of the page.

1. Embellish a garment using any of the techniques described in Lesson 47. Apply the embellishment to a new garment or make an old one more attractive.
2. Make accessories—hats, purses, backpacks, scarves, or belts.
3. Construct articles for the home, such as pillows, curtains, place mats, napkins, or tablecloths.
4. Use the appliqué technique to create a framed artwork piece or wall hanging.
5. Try heirloom sewing. *Heirloom sewing* is a term that refers to the techniques used in the Victorian era to embellish fabrics. Pintucking, lace, and cutwork designs are often associated with heirloom sewing.
6. Make a garment for a special occasion. Try using beadwork or novelty fabrics, such as tissue lamé, brocade, or velvet.
7. Construct a garment for someone else, such as a friend or child.
8. Embellish a child's garment with fun appliqués or functional knee patches.
9. Choose a garment from your wardrobe that you do not like. Try making a few changes to enhance the appearance.
10. Plan a sewing area in your home.

In the space below, write your ideas for additional experiences.

Name ____________________

Date ____________ Period ________

Planning Additional Experiences

Use this form to plan projects that will be completed outside the classroom. Out-of-class projects should be well planned. They should also relate to what is being taught in class as well as to your personal needs.

1. What is your project? ____________________
2. Why have you selected this project? ____________________
3. When do you plan to begin the project? (date) ____________________
4. When do you plan to complete the project? (date) ____________________
5. List the materials you need for your project and the cost of each item. (Use the back of this sheet if you need additional space.)

Materials	Costs
Total	

6. What lessons in this book will help you complete your project?

Name ____________________

Date ____________ Period ________

Evaluating Additional Experiences

Use this form to evaluate projects you have completed outside the classroom. These may be projects completed for extra practice of skills you are learning in class. These may also be projects you have completed for extra credit or personal enjoyment.

1. Explain any difficulties you had as you progressed through your project. How did you solve your problems?

2. Explain what you would do differently if you were to do this project again.

3. What new skills did you learn as you worked on this project?

4. What do you think you did especially well?

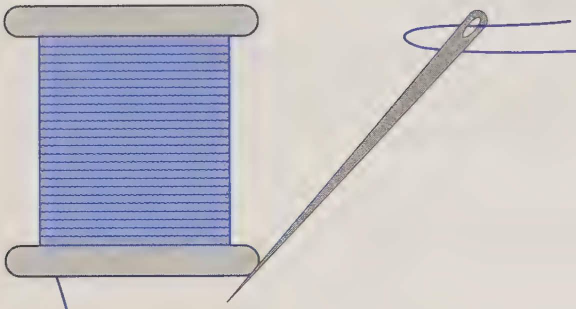
5. Do you consider this project a worthwhile investment of your time? Why or why not?

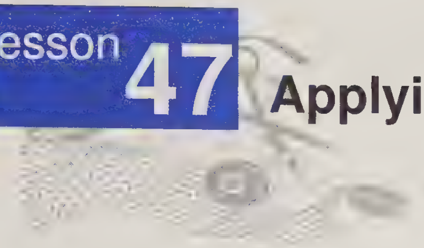
6. Do you consider this project a worthwhile use of your money? Why or why not?

7. Are you pleased with the results of your project? Why or why not?

In the space below, have your parent or guardian comment on the success of your project. (Use the back of this sheet if you need additional space.)

notes





Lesson 47 Applying Surface Designs

Objectives

This lesson will help you to:

- become aware of the wide variety of surface designs available for embellishing sewing projects.
- research a surface design you would like to use on a sewing project.
- practice skills already learned as you apply surface designs to create new, unusual, and challenging sewing projects.

Words to Know

embellishment
couching
fraying
appliqué

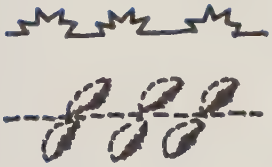
Gathering Information

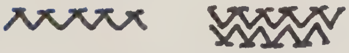
Once you have learned basic sewing techniques, you will be ready to face new challenges. There is an endless variety of projects, fabrics, tools, and techniques to try. One of the hottest trends today is in the area of surface design. There are numerous ways to apply surface designs to garments and projects. This lesson will help you to explore a few possibilities.

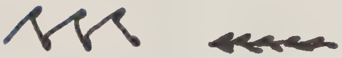
Embellishing Sewing Projects

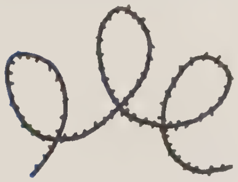
Adding surface design to garments and projects is called ***embellishment***. There are a wide variety of techniques for applying surface designs. Decorative stitching, fraying, appliqués, fabric paint, beads, and jewels are just a few of the embellishments that you may use. To get ideas, browse through fabric and craft stores, read books, and look at ready-to-wear fashions. You never know where you might find a great idea. You might even want to keep an idea notebook.

Decorative Stitching


built-in stitches


repeat rows


adjust length/width

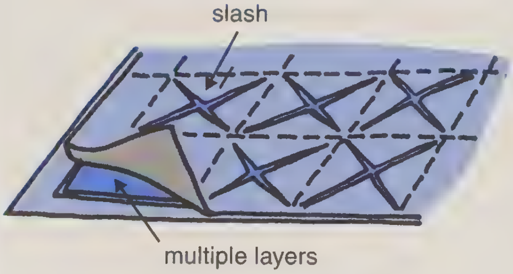

couching

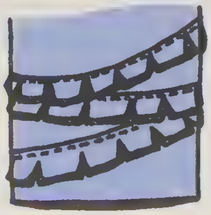
Machine stitching is a great way to add decorative detail to your project. Your machine may be able to add interest with a twin needle or machine embroidery. Even if your machine has limited stitch options, you may be able to do more than you think! Creative designs can be made by repeating rows of machine stitching. You can also build in decorative stitches by adjusting stitch length and width or using interesting thread color combinations.

Other creative ways to apply surface designs using your machine include couching. ***Couching*** is applying cord, narrow trim, or yarn to the surface of fabric by sewing over it. Plan your design and mark where you want to place the cording, trim, or yarn. Then stitch it in place using a zigzag stitch.

Don't forget your serger has great potential for embellishing garments and projects. Be creative! Make use of the overlock stitch, rolled edge, and flatlock stitch. Combine these techniques with decorative threads to design marvelous embellishments for your garments and accessories.

Fraying

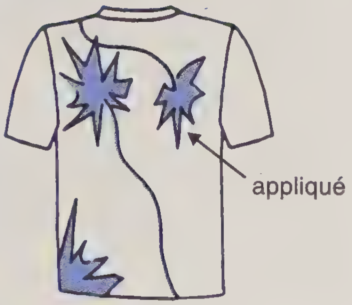


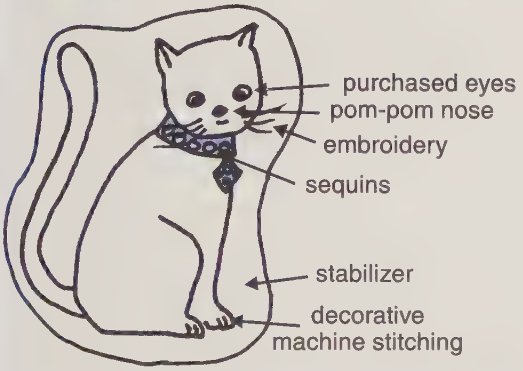


Fraying is a novelty effect created by sandwiching and stitching together several layers of tightly woven, natural fiber fabric. Some of the layers are then cut in spots to expose successive layers. The fabric is washed, dried, and brushed to make cut edges curl and fray.

A variation of this technique is to attach strips of cut fabric to a garment. Several layers of fabric may be used. Begin by marking placement lines on the garment; then stitch fabric strips in place. Wash, dry, and brush to create fraying.

Appliqués



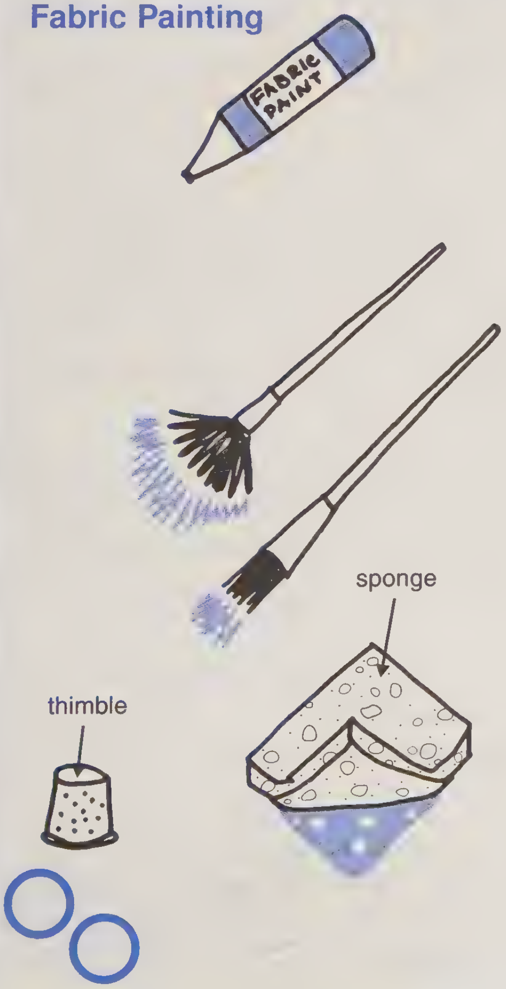


Appliqués are fabric designs attached to the surface of a textile item by fusing or by hand or machine stitching. Appliqués may be purchased ready to apply. You can also make appliqués using various techniques, depending on the desired effect. Do a little research to find the most suitable method.

Make appliqués from fabrics compatible in weight and care requirements to the item to which you are attaching them. Plan your design and sequence of steps before you begin stitching.

Appliqués are often fused to the surface of a garment. Then the raw edges are covered with decorative machine stitching. Stabilizers placed under the appliqué make stitching easier. Appliqués may then be embellished by attaching buttons, ribbon, bows, sequins, fabric paint, cord, lace, rhinestones, or other trim. Permanent fabric glue may be used to attach decorative items.

Fabric Painting



Easy-to-use fabric paints make embellishing garments fun and easy. These paints are colorfast, nontoxic, and washable. They are available in pearl, glossy, gel, and glitter formulas for a variety of looks. They can be used to create colorful, permanent designs.

Paint can be applied to either woven or knit fabrics. Medium to heavy woven fabrics are easiest to paint. Begin by planning your design. You may want to transfer a design or pattern to the fabric before painting. Many commercial designs are available. Simply heat transfer them onto your fabric according to manufacturer's directions.

Before applying paint, prepare your fabric or garment by washing to remove sizing. Place a piece of cardboard or plastic between garment layers. This will prevent paint from bleeding onto another part of the garment. Use another piece of cardboard or plastic to protect the work surface.

Experiment! Use paint by squeezing from the bottle or apply with sponges, brushes, paint pads, kitchen tools, or sewing tools. Always practice painting techniques on fabric scraps before painting on your garment.

(Continued)

You must allow fabric paint to dry thoroughly before you can wear or launder garments. Refer to manufacturer's directions for application tips, drying times, and laundering instructions.

Beads, Buttons, and Trims

Surface decorations, such as beads, buttons, and trims, come in a wide variety of sizes, shapes, and colors. Use your imagination to combine them in creative ways.

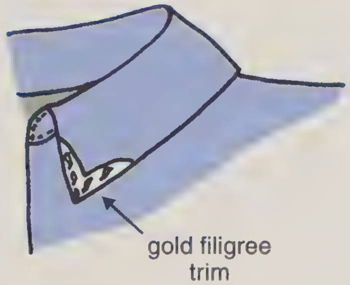
Surface decorations may be purchased individually or as appliqués. Some are designed to be ironed on; others to be sewn. Fusible web may be used to attach the sew-on variety. Test fuse before applying decorations to your project.

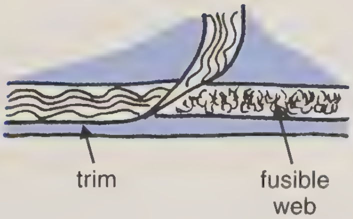
Beads and sequins may be attached to garments in several ways. To hand sew beads, use a beading needle and a double strand of waxed cotton-wrapped polyester thread. Some beads and sequins may be purchased by the yard and sewn to garments using a machine zigzag stitch. Careful stitch adjustment is necessary to avoid breaking the needle. Beads and sequins can also be made into appliqués on backing fabric. These appliqués can be permanently or temporarily attached to your garment.

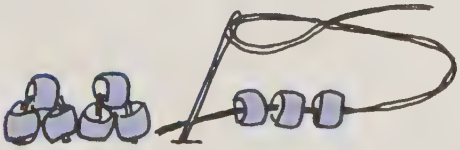
Studs and rhinestones can be attached quickly and easily using a specialized tool. The tool neatly pushes the prongs on the studs and rhinestones through fabric and bends them securely in place.

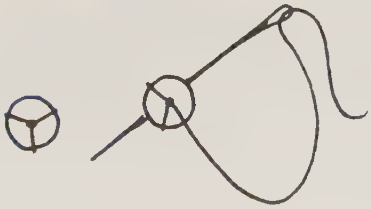
Jewels can be attached using washable glue. Follow manufacturer's directions.

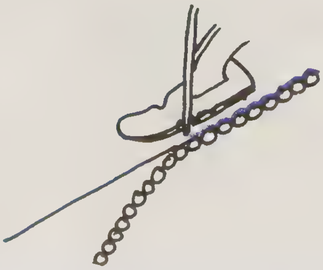
Be sure to check care requirements for all embellishments. Some embellishments may have to be removed before dry cleaning or laundering.











Name ______________________________

Date ____________________ Period ____________

Activity 47-1: Learning About Surface Design

Select one surface design idea that interests you. You may choose one of the ideas discussed in this lesson. However, you are not limited to those ideas. Research the surface design idea you have selected. Your teacher may provide resources to help you. Local fabric stores may also be a source of information. Find out what patterns, kits, craft magazines, and how-to books are available to help you learn more about this design. Investigate materials needed and their costs. Learn about different techniques for applying the design. Summarize your findings in the spaces below.

Type of surface design ______________________________

List five resources you found that contained information about and/or ideas for using this surface design:

____

____

____

List the materials required to apply this surface design and the cost of each.

Materials Required	Cost

Briefly describe one technique for applying this surface design. (Attach additional pages if necessary.) ______________________________

____

____

What other techniques can be used to apply this design? ______________________________

____

Which technique do you intend to use? Explain your choice. ______________________________

____

____

Practice applying this surface design. Attach samples of your work to this page.

Now you are ready to apply your surface design to an actual sewing project. If your project is to be completed in class, include your surface design ideas on the project planning sheets provided in Unit 5. For projects completed outside of class, use the forms at the beginning of this unit to help you plan your project.

Name ______________________________

Date ____________________ Period ____________

Activity 47-2: Evaluating Learning

The surface design sample you completed in Activity 47-1 will be evaluated using the chart below. You may also use this form when evaluating a surface design applied to your sewing project or additional experience projects.

	Poor	Fair	Good	Excellent
Surface design enhances appearance of item.				
There is evidence that the steps for applying the surface design were planned in advance.				
Materials used in the surface design are compatible with care requirements of fashion fabric.				
An appropriate method was used to attach the surface design.				
Appropriate pressing techniques were used.				
Machine stitching, if any, is neatly done. Correct machine tension was used.				
Hand stitching, if any, is neatly done and securely fastened off.				
Stabilizers were used when necessary to reinforce areas where surface design was applied.				
Fabric glue and fusing materials do not show.				
Threads are clipped.				

Glossary

A

appliqué. Fabric designs attached to the surface of garments or other projects by fusing, hand stitching, or machine stitching. (47)

awl. A sharp, pointed tool used for making eyelets and round holes. (10)

B

ballpoint needles. Needles that have special rounded tips designed to slide between threads in knit fabric. (10)

basting stitch. A hand stitch that is used to temporarily hold layers of fabric together. (22)

basting tape. Double-faced tape used for basting fabric pieces together. (10)

beeswax. Wax used to coat sewing thread so it will not tangle. (10)

betweens. Short needles used for handwork and quilting. (10)

bias. The diagonal grain of fabric, which forms a 45 degree angle with the lengthwise and crosswise yarns. (4)

bias tape. A bias-cut tape with enough natural stretch to use for binding curved edges. (10)

blend. A type of fabric made by spinning, weaving, or knitting two or more fibers together. (3)

bobbin. A small spool used to hold the lower thread in a sewing machine. (10)

bobbin case. A part on a sewing machine that holds the bobbin and applies tension to the thread. (11)

bobbin winder. A part on a sewing machine that winds thread onto a bobbin. (11)

bodkin. A large-eyed instrument used for inserting elastic or drawstrings in casings. (10)

bound finish. A seam finish often used in unlined jackets and coats, made by stitching double-fold bias tape around the seam allowances to prevent them from raveling. (16)

bubbling. Small bubbles that may appear on certain fabrics after applying interfacing. (20)

buttonhole stitch. A hand stitch used to bind a raw edge. (22)

C

catch stitch. A hand stitch used to stitch a flat edge to fabric. (22)

cellulosic fiber. A fiber that comes from plants or that is manufactured from a fibrous substance found in plants. (3)

chaining off. Making a thread chain on a serger without fabric under the presser foot. (44)

clean finishing. A means of finishing a raw edge on a garment piece by turning under the edge and stitching. (17)

clipping. Cutting slits into a seam allowance on an inside curved seam to make the seam turn over smoothly. (15)

cone adapter. A serger attachment that is placed on a spool pin under a thread cone. (44)

couching. An embellishment technique in which cord, narrow trim, or yarn is stitched to the surface of fabric to create a design. (47)

course. A row of loops that forms the crosswise grain in knit fabrics. (4)

cover stitch hem. A hem make by using the cover stitch, which features a twin- or triple-needle stitch on one side and an overlock stitch on the other. (45)

cross-wound thread. Thread that is wound on cones and tubes so it will peel evenly off the top during high-speed sewing. (44)

crosswise fold. A fold in fabric that is perpendicular to the selvage. (8)

crosswise grain. The fabric direction formed by crosswise yarns running from selvage to selvage. (4)

D

decorative lapped seam. An ornamental seam made by serging fabric edges with decorative thread, then lapping edges and topstitching. (45)

differential feed regulator. A part on some sergers that adjusts the front and back feed dogs to operate at different speeds. (44)

directional stitching. Stitching done with the grain of fabric. (13)

double fold. A fold where each selvage is folded in lengthwise toward the center of the fabric. (8)

double-stitched hem. A hem constructed by catch stitching the hem to the garment at half the finished hem width, then stitching again at the top of the hem. (23)

double-stitched seam. A seam with a second row of stitching holding the seam allowances together used on sheer fabrics and lightweight knits. (14)

drapability. The ability of a fabric to fall into soft folds when placed on the body. (3)

drop feed button. A part on a sewing machine that lowers the feed dog so fabric will not be fed under the presser foot. (11)

E

ease. The amount of extra fabric allowed in a garment to make the garment comfortable to wear. (7)

eased hem. A hem used to ease in extra fullness, such as on a circular skirt. (23)

easing. Making a larger piece of fabric fit with a smaller piece of fabric as a seam is sewn. (19)

easy-threading method. A method for changing thread on a serger without having to rethread the machine. (44)

edge stitching. A form of topstitching in which stitching is close to the finished edge of the garment piece. (21)

embellishment. The adding of a surface design to fabric using paint, beads, buttons, appliqués, or other techniques. (47)

emery bag. A small bag into which pins and needles are jabbed for sharpening. (10)

even plaid. A fabric pattern that has colored lines and spaces that are the same in both the lengthwise and crosswise directions. (8)

F

fabric. A textile product made from woven, knitted, or pressed yarns. (3)

fabric marking pen. A water-soluble, fading, or permanent pen designed for marking fabric. (10)

feed dog. A part on a sewing machine that moves fabric under the presser foot. (11)

fiber. A small, hairlike strand that is the basis of all yarns and fabrics. (3)

filling yarn. A crosswise yarn in fabric that runs from selvage to selvage. (4)

finish. A treatment applied to fabric to change the feel, appearance, or performance of the fabric. (3)

finished-edge hem. Serged fabric edge used to finish the hem for tuck-in blouses. (45)

5-thread stitch. A serger stitch that consists of a 2-thread chain stitch and a 3-thread overlock stitch. (44)

flat construction. A method of construction that involves finishing necklines, armseyes, sleeves, and hems before serging underarm and side seams. (45)

flat-felled seam. A self-enclosed seam used where durability is needed or a tailored appearance is desired. (14)

flatlocked hem. A serged hem constructed by folding the hem up and back and serging just on top of the fold. (45)

flatlocked seam. A seam constructed by serging two layers of fabric together, then pulling the seam apart until it lies flat inside the stitching. (45)

flatlocking. Joining two layers of fabric by serging a seam and then pulling the seam apart until it lies flat. (44)

4-thread stitch. A serger stitch that combines the 2-thread chain stitch and the 2-thread overedge stitch. (44)

fraying. Stitching together several layers of fabric; cutting some of the layers in spots; and then washing, drying, and brushing the fabric to make the cut edges curl and fray. (47)

French seam. A durable, self-enclosed seam often used on sheer fabrics. (14)

fusible interfacing. A type of interfacing fabric that has had a bonding material applied to one surface. (20)

fusible knit interfacing. An interfacing made of knit fabric with a fusible back. (20)

fusible web. A nonwoven material that may be used to bond two layers of fabric together. (10)

G

gathering. Working in fabric fullness as a seam is sewn. (19)

generic name. The name given to a family of manufactured fibers that have the same general characteristics. (3)

glue stick. Solid glue used for pinless basting. (10)

grading. Trimming each layer of a seam allowance to a different width to reduce bulk. (15)

grain. The lengthwise, crosswise, or bias directions in fabric, as determined by the position of the yarns and fibers. (4)

H

hand. The way a fabric feels. (3)

hand basting. Hand stitching designed to temporarily hold garment pieces together until permanent machine stitching can be applied. (14)

hand wheel. A part on a sewing machine that turns to raise or lower the needle and thread take-up lever. (11)

heat transfer pencil. A marking tool used to trace designs that can then be transferred to fabric with the heat of an iron. (10)

hem gauge. A multipurpose measuring tool that is curved on one side to mark standard hem depths and straight on the other side for use as a ruler. (10)

hemming stitch. A hand stitch used to stitch down an edge that has been turned under. (22)

hem tape. A sewing tape that is used to finish hems. (10)

I

instruction sheet. A sheet included with a pattern that explains how to lay out, cut out, and construct the garments included in the pattern. (5)

interfacing. A layer of fabric placed between the facing and the fashion fabric. It may be used to create a fashion silhouette, to increase the life of a garment, to add support to stress areas, or to emphasize detail areas of the garment. (20)

iron cover. A cover, usually coated with a nonstick finish, that slips over the bottom of an iron to prevent matting, shine, or melting of fabric. (12)

ironing. A back-and-forth motion with an iron used to smooth wrinkles from garments. (12)

K

knit fabric. A fabric made by interlocking loops of a continuous length of yarn to form a ribbed fabric. (3)

knives. Parts on a serger that trim seam allowances as stitches are formed. (44)

L

lengthwise fold. A fold in fabric that is parallel to the selvage. (8)

lengthwise grain. The fabric direction formed by lengthwise yarns running parallel to the selvage. (4)

lettuce-leaf hem. A ruffled-edged hem created by stretching fabric while serging using a rolled or unrolled satin stitch edge. (45)

long-handled tweezers. Tweezers with long, bent handles, which are especially useful for threading the loopers on a serger. (10)

loopers. Parts on a serger that are necessary in forming stitches. (44)

loop turner. A long, slim wire with a latch hook at one end used to turn tubing or cording to the right side. (10)

M

machine-blind hem. A hem done by machine that does not show on the outside of a garment. (23)

manufactured fiber. A fiber that is made from chemicals and other raw materials by manufacturing processes. (3)

mock band hem. A serged hem designed to give the appearance of an attached band. (45)

mock flat-felled seam. A partially enclosed seam constructed by topstitching a serged seam allowance over a trimmed seam allowance. (45)

mock French seam. A seam serged using a narrow rolled hem. (45)

multisized pattern. A pattern that includes cutting lines for several sizes on one pattern tissue. (2)

N

napped fabric. Fabric such as corduroy, velvet, or velveteen that has short fibers brushed up on the surface. (2)

narrow double-stitched seam. A conventionally-stitched seam with the seam allowance serged ⅛ inch from the first line of stitching. (45)

narrow rolled hem. A serged hem made using an unbalanced stitch, which causes the fabric edge to roll under as stitches are formed. (45)

narrow turned-under hem. A hem made by turning up a ¼-inch serged fabric edge and edge stitching or topstitching it in place. (45)

narrow unrolled hem. A serged hem used to create a flat edge on heavy fabrics and finish edges on place mats, tablecloths, ruffles, and scarves. (45)

natural fiber. A fiber that comes from an animal or plant. (3)

needle board. A bed of needles attached to a stiff backing used to prevent pile fabrics from being crushed while pressing. (12)

needle clamp screw. A part on a sewing machine that holds the needle in place. (11)

needle threader. A thin wire tool that pulls thread through the eye of a needle. (10)

noncellulosic fiber. A fiber made completely from chemicals. (3)

nonwoven. A fabric made by bonding nonwool fibers or yarns together into a web. (3)

nonwoven interfacing. An interfacing fabric that is constructed using chemical binders. (20)

notching. Cutting wedges into a seam allowance on an outside curved seam to reduce bulk when the seam is turned. (15)

notion. Any supply that is needed as part of a sewing project, such as elastic, thread, buttons, bias tape, zippers, and trims. (2)

O

overcast stitch. A hand stitch used to prevent a flat, raw edge from raveling. (22)

P

partial fold. A lengthwise or crosswise fold where some of the fabric is left extended as a single layer. (8)

pattern weights. Circular or shaped weights used to hold pattern pieces in place during cutting. (10)

pile weave. A fabric weave formed by adding extra yarns that project from the surface of a plain or twill weave. (3)

pin basting. Pinning garment pieces together along a seamline to hold them until machine stitching is applied. (14)

pin cushion. A small, fabric-covered form into which pins are pushed for storage. (10)

pinking shears. Shears that make zigzag-shaped cuts and are used to finish raw edges of fabric. (10)

plain seam. The most widely used seam that forms the basis for constructing other types of seams. (14)

plain weave. A fabric weave formed by interlacing each crosswise yarn with each lengthwise yarn. (3)

point presser. A wooden tool with a pointed end and a narrow extended surface used when pressing points and corners. (12)

point turner. A plastic or wooden tool used to push out points of garment areas such as collars and cuffs. (10)

pounding block. A wooden block used to pound seams to flatten them; also known as a *clapper*. (12)

power and light switch. A part on a sewing machine that turns on the machine. (11)

preshrinking. Shrinking fabric before cutting out a pattern. (4)

press cloth. Any cloth, but especially cheesecloth, used between fabric and an iron to prevent shine or iron marks on the fabric. (12)

press mitt. A padded mitt that fits on the hand and is used when pressing hard-to-reach places. (12)

presser foot. A part on a sewing machine that holds fabric in place as the machine stitches. (11)

presser foot lever. A part on a sewing machine that raises and lowers the presser foot. (11)

presser foot screw. A part on a sewing machine that holds the presser foot in place. (11)

pressing. An up-and-down motion with an iron used to flatten garment details during construction. (12)

pressure regulator. A part on a sewing machine that adjusts the amount of pressure applied to the presser foot and, in turn, the fabric. (11)

protein fiber. A fiber that comes from an animal. (3)

R

raw edge. The cut end of fabric. (4)

repeat. One complete, four-sided design in a plaid fabric. (8)

reverse stitch control. A part on a sewing machine that allows the machine to backstitch. (11)

rib. A row of loops that forms the lengthwise grain in knit fabrics. (4)

ribbon-finished hem. A hem constructed by serging over ribbon, cutting off the hem allowance. (45)

rolled-hem stitch. A hand stitch used to make a small hem on sheer fabric. (22)

rotary cutter. A round blade attached to a long handle. The blade turns and cuts fabric as it is pushed along the pattern cutting line. (10)

S

satin weave. A weave formed by interlacing a yarn in one direction with four or more yarns in the other direction. Each interlacing begins two yarns over from the last one, producing a fabric with a smooth, shiny surface. (3)

scalloping shears. Shears that make scalloped cuts and are used to finish raw edges of fabric. (10)

scissors. A tool used to trim seams, clip curves, and open buttonholes. (10)

seam. A row of stitching that joins one or more garment pieces. (14)

seam finish. A technique used to keep the raw edges of a seam allowance from raveling and give them a more attractive appearance. (16)

seam gauge. A ruler with an adjustable marker for measuring seam allowances and hems. (10)

seam ripper. A small tool used for ripping out stitching. (10)

seam roll. A firm, cylindrical cushion with rounded ends used when pressing small curves or long seams in narrow areas. (12)

seam sealant. A sewing notion used on fabric to prevent fraying or raveling. (44)

selvage. The finished edge of fabric as it comes off a loom. (4)

serged (pine-stitched or zigzagged) hem. A hem in which the raw edge is finished with a serge or zigzag stitch before the hem is hand stitched to the garment. (23)

serged/topstitched seam. A seam constructed by topstitching a serged seam to fabric. (45)

serger. A specialized type of sewing machine that can stitch, trim, and finish seams all in one simple step. (44)

serge- (pine-) stitched finish. A seam finish that wraps stitches around the raw edge of a seam allowance to prevent raveling. (16)

sharps. Medium-length needles used for all-purpose hand sewing. (10)

shears. A tool with different sized handles that is used to cut fabric. (10)

single-layer construction. A method of construction often used on serged projects that eliminates interfacings, facings, and undercollars. (45)

sleeve board. Two small, connected ironing boards used for pressing garment parts that will not fit on a regular ironing board. (12)

slip stitch. A hand stitch used to stitch a hem edge that has been turned under. (22)

slot seam. A decorative seam that helps prevent stretching in the seamline. (14)

spool cap. A serger attachment that is placed over a conventional spool of thread that has been placed on a spool pin. (44)

spool pin. A part on a sewing machine that holds the spool of thread. (11)

stabilize. To add extra strength to areas that receive much stress during wear. (45)

stabilizer. A product that provides support for areas of fabric being decorated with appliqué, cutwork, and machine embroidery. (10)

stable knit. A knit fabric that has a limited degree of stretch. (2)

staystitching. Stitching used to stabilize edges of garment pieces that might otherwise be stretched out of shape during construction. (13)

stitched-and-pinked finish. A seam finish used on fabrics that ravel only slightly, made by stitching close to the edge of a seam allowance and then trimming the allowance with pinking shears. (16)

stitched-and-pinked hem. A hem in which the raw edge is finished by machine stitching close to the edge and then pinking the fabric close to the stitching line. (23)

stitch finger. A metal prong, located on the throat plate or the presser foot of a serger, around which stitches are formed. (44)

stitching guidelines. Markings on the throat plate of a sewing machine used to keep the edge of fabric aligned so seam allowances will be uniform in width. (11)

stitch length control. A part on a sewing machine that adjusts the number of stitches per inch. (11)

stitch selector. A part on a sewing machine that changes the type of stitches being sewn. (11)

stitch width control. A part on a sewing machine that adjusts the width of zigzag and other two-dimensional stitches. (11)

stretch interfacing. A type of interfacing that may stretch in one direction, two directions, or all directions. (20)

stretch knit. A knit fabric that has a great amount of stretch and requires special sewing techniques. (2)

T

tailor's chalk. A special type of chalk used to mark on fabric. (10)

tailor's ham. A firm, oblong cushion used for pressing curved areas of a garment, such as darts. (12)

tailor's tacks. A thread loop made through all layers of fabric to mark the location of a pattern symbol. (9)

take-up lever. A part on a sewing machine that pulls the thread from the spool and through the tension regulator. (11)

taped hem. A hem that is constructed by machine stitching stretch lace or nonstretch tape to the raw edge of the hem and then hand stitching the tape to the garment. (23)

tape measure. A flexible measuring tool used to take body measurements and to measure fabric and pattern pieces. (10)

tension dial and regulator. A part on a sewing machine that adjusts and applies tension to the thread so that it feeds at a constant rate. (11)

thimble. A plastic, metal, or animal skin shield that fits over the middle finger to protect it while guiding a needle, especially through dense or heavy fabric. (10)

thread cone. A type of thread spool commonly used for serging that contains larger amounts of thread than conventional spools. (44)

thread guides. Parts on a sewing machine that guide the thread from the spool to the needle. (11)

3/4-thread overlock stitch. A 3-thread serger stitch with a fourth stitch running down the middle, adding durability. (44)

3-thread overlock stitch. A serger stitch that connects or locks threads at the seamline. (44)

throat plate. A part on a sewing machine that covers the area around the needle. (11)

topstitched seam. A variation of the plain seam used to achieve a decorative effect. (14)

topstitching. A line of stitching on the outside of a garment generally for the purpose of decoration. (21)

topstitching guide. A clear plastic strip or adhesive-backed tape used to help neatly place decorative machine stitching on the outside of sewn items. (10)

tracing paper. Color-coated paper used to transfer pattern symbols to fabric. (10)

tracing wheel. A wheel used with tracing paper to transfer pattern symbols to fabric. (10)

trade name. The name used by a company to identify its specific manufactured fiber. (3)

trimming. Cutting off part of a seam allowance to reduce bulk. (15)

turned-and-stitched finish. A seam finish used on light- to medium-weight fabrics, made by turning under the edge of each seam allowance and stitching close to the fold. (16)

turned-and-stitched hem. A hem that is constructed by turning under the raw edge of the hem and stitching by machine, then hand stitching the hem to the garment. (23)

twill tape. A sturdy polyester tape used to reinforce garment areas that may stretch or weaken. (10)

twill weave. A fabric weave formed by interlacing a yarn in one direction with two or more yarns in the other direction. Each interlacing begins one yarn over from the last one, forming a pattern of diagonal lines in the fabric. (3)

2-thread chain stitch. A serger stitch formed by the left needle and the lower looper on 4- and 5-thread sergers. (44)

2-thread overedge stitch. A serger stitch that does not connect or lock threads at the seamline. (44)

U

understitching. A row of stitching that holds a seam allowance to one of the fabric pieces joined by the seam. (18)

uneven plaid. A fabric pattern that has colored lines and spaces that are not the same in the lengthwise and/or crosswise direction. (8)

W

warp yarn. A lengthwise yarn in fabric that runs parallel to the selvage. (4)

weft. The crosswise yarns in fabric; also called *filling yarns*. (4)

weft-insertion interfacing. A type of interfacing that has knitted warp yarns with weft yarns woven in. (20)

welt seam. A seam used to give a finished garment a tailored look. (14)

woven fabric. A fabric made by interlacing yarns at right angles. (3)

woven interfacing. A type of interfacing that is constructed by interlacing yarns at right angles. (20)

Y

yardstick. A long, rigid measuring tool that is one yard in length. (10)

yarn. A strand made of a number of fibers that are twisted together. (3)

Z

zigzagged finish. A seam finish made by stitching a zigzag machine stitch close to the edge of a seam allowance. (16)

Index

A

Appliqués, 431
Awl, 136

B

Backstitching, 145
Back view illustrations, 38
Ballpoint needles, 135
Baste marking, 123
Basting,
  hand, 240
  machine, 248
  serger, 394
Basting tape, 137
Beads, 432
Beeswax, 136
Belt loops, 409
Betweens, 136
Bias, 64
Bias tape, 130
Blends, 52
Blind hem, 398
Bobbin, 133
  winding and inserting, 143
Bobbin case, 142
Bobbin winder, 142
Bodkin, 136
Bound finish, 196
Bubbling, 225
Buttonholes, 148, 365
Buttonhole stitch, 241
Buttons, 366, 432

C

Casings, 353-356
Catch stitch, 241
Cellulosic fibers, 50
Centered zipper, 306, 307
Center-gathered ruffles, 409
Chaining off, 378
Clean finishing, 201-206
  facings, 318
Clipping, 122, 189
Collars, 323-327
  attaching, 325, 326
  construction, 324
  serged, 410
  types, 323
Cone adapters, 375
Continuous stitching, 407
Couching, 430
Course, 65
Cover stitch hem, 400
Crosswise fold, 102
Crosswise grain, 64
Cross-wound thread, 375
Cuffs, 341-344
  attaching, 342
  interfacing, 341, 342
  rolled, 343
  serged, 411
Curved seam, 182
Cutting equipment, 131
Cutting pattern pieces, 106, 107

D

Darts, 283, 284
  serged, 407
Decorative lapped seam, 289, 395
Decorative serging, 400
Decorative stitches, 149, 430
Differential feed regulator, 373, 380
Directional stitching, 173, 233
  seams, 288
Double fold, 102
Double-stitched hem, 248
Double-stitched seam, 184
Drapability, 54
Drop feed button, 142

E

Ease, 88
Eased hem, 246, 398
Easing, 213, 214
Easy-threading method, 376
Edge stitching, 233
Elastic casings, 353-356
  buttonholes for drawstring, 354
  finishing edge, 354
  knit fabrics, 355

  length, 354
  serged, 412
  width, 353
Elastics, 130
Embellishment, 429
Emery bag, 136
Equipment, 129-140
  cutting, 131
  hand stitching, 135, 136
  machine stitching, 133
  marking, 132
  measuring, 130
  pressing, 163, 164
Even plaid, 108

F
Fabric, 49-74, 102
  blends, 52
  bolt end labels, 53, 54
  characteristics chart, 57
  construction, 51, 52
  definition, 49
  finishes, 52, 53
  folding, 102
  grain, 63-67
  preparation, 63-74
  preshrinking, 68, 69
Fabric marking pen, 121, 132
Fabric painting, 431, 432
Facings, 317-322
  attaching to garment, 319
  clean finishing, 318
  preparation, 318
  securing, 319
  types, 317
  understitching, 319
Fasteners, 365-368
  buttons, 365, 366
  hook and loop tape, 367
  hooks and eyes, 367
  snaps, 367
Feed dog, 142
  serger, 372
Fiber, 49
Figure type, 32, 38
Filling yarns, 64
Finished-edge hem, 398
Finishes, 52, 53
5-thread stitch, 377
Flat construction, 393
Flat-felled seam, 183
Flatlocked hem, 398
Flatlocked seam, 396
Flatlocking, 377
Fly front zippers, 309
4-thread stitch, 377
Fraying, 430
French seam, 184
  serged, 396
Fused hem, 363
Fusible interfacing, 222
Fusible knit interfacing, 222
Fusible web, 137

G
Garment descriptions, 38
Gathering, 214
  serger, 397
Generic name, 50
Glue stick, 137
Grading, 190
Grain, 63
  knit fabrics, 65
  nonwoven fabrics, 65
  straightening, 66, 67

H
Hand, 54
Hand basting, 180
Hand stitching, 239-244
  equipment, 135, 136
Hand wheel, 143
  serger, 373
Heat transfer pencil, 132
Hem construction, 361-364
  fused hem, 363
  marking, 361
  preparation, 362
  rippled hem, 363
Hem gauge, 130
Hemming stitch, 241
Hems, 245-251
  choosing, 245
  double-stitched, 248
  eased, 246
  knits, 249
  linings, 358
  machine-blind, 248, 249
  narrow machine, 248
  pocket, 293
  serged, 398-400
  serged (zigzagged), 247, 248
  stitched-and-pinked, 247
  taped (nonstretch tape), 247
  taped (stretch lace), 246, 247
  turned-and-stitched, 246
  twin-needle, 249
Hem tape, 130
Hook and loop tape, 367
Hooks and eyes, 367

I
Instruction sheet, 75-80
Interfacing, 221-229
  application, 224, 225
  cuffs, 341, 342
  preshrinking fabrics, 224
  selection, 223, 224
  types, 222, 223
  using, 225, 226
  waistbands, 349, 350
Invisible zippers, 311
Iron cover, 165
Ironing, 163, 166

K
Kimono sleeves, 334
Knit fabrics, 52
  folding, 103
  grain, 65
Knit gauge, 38, 39
Knives, 373, 374

L
Lace, 414
Lapels, 329-331
  sewing collar seam, 329
  topstitching, 330
Lapped zipper, 307-309
Layout guidelines, 103, 104
Lengthwise fold, 102
Lengthwise grain, 64
Lettuce-leaf hem, 399
Linings, 357-359
Long-handled tweezers, 133
Loopers, 373
Loop turner, 136

M
Machine-blind hem, 248, 249
Machine hems, 248, 249
Machine stitches, 148, 149
Machine stitching equipment, 145
Manufactured fibers, 50
  characteristics chart, 56, 57
Marking equipment, 132
Measurements, 31-36, 39, 41
Measuring equipment, 130
Mock band hem, 398
Mock flat-felled seam, 396
Mock French seam, 396
Multisized patterns, 38

N
Napped fabrics, 39
Narrow double-stitched seam, 395
Narrow rolled hem, 399
Narrow turned-under hem, 398
Narrow unrolled hem, 399
Natural fibers, 50
  characteristics chart, 55
Needle board, 165
Needle clamp screw, 143
  serger, 373
Needles, 135, 144
  changing, 144, 374
  hand, 135
  machine, 142
Needle threader, 136
Noncellulosic fibers, 50
Nonwoven interfacing, 222
Nonwovens, 52
  grain, 65
Notching, 190
Notions, 40, 129-140

O
Open-sleeve method, 335
Overcast stitch, 241

P
Partial fold, 102
Pattern adjustments, 87-100
  after cutting out pattern, 94
  bust, 93
  crotch depth, 90
  design and fit, 87
  ease, 88
  hip, 93
  length, 89, 90
  pattern measurements, 88
  sleeve length, 91
  waist, 92
  width, 91, 92
Pattern envelope, 37-48
  back view illustrations, 38
  body measurements, 39
  fabrics suggested, 38
  figure type and size, 38
  garment descriptions, 38
  knit gauges, 38, 39
  notions, 40, 41
  pattern classifications, 37
  photographs and sketches, 37
  yardage requirements, 39, 40
Pattern layout, pinning, and cutting, 101-117
  cutting, 106, 107
  folding fabric, 101
  folding knit fabrics, 103
  layout guidelines, 103, 104
  pinning, 106

  placing pieces on fold, 104
  placing pieces on grain, 105
  plaid fabrics, 108, 109
  striped fabrics, 107, 108
Pattern size, 33
Pattern symbols, 81-86
  transferring to fabric, 119-127
Pattern weights, 132
Pile weave, 51
Pin basting, 179, 180
  seams, 279
Pincushion, 136
Pine (serge) stitch, 148
Pinked seam finish, 195
Pinking shears, 131
Pin marking, 123
Pinning pattern pieces, 106
Pins, 132
Plackets, 313-316
  attaching, 314, 315
  continuous lap, 338, 339
  matching symbols, 314
  preparing the placket band, 313
  reinforcing corners, 314
  types, 313
Plaid fabrics, 108
  seams, 288
Plain seam, 181
Plain weave, 51
Pleats, 285
Pockets, 293-297
  eliminating bulk, 294
  hemming, 294
  in-seam pockets, 296
  patch pockets, 293
  positioning, 295
  serged, 408
  topstitching, 294
  variations, 295
Point presser, 165
Point turner, 136
Pounding block, 165
Power and light switch, 143
  serger, 373
Preshrinking, 68, 69
  interfacing fabrics, 224
Press cloth, 165
Presser foot, 143
  serger, 373
Presser foot lever, 143
Presser foot screw, 143
Pressing, 163-172
  applying iron pressure, 166, 167
  definition, 163
  equipment, 164, 165
  seams and darts, 167
  setting iron temperature, 168
Press mitt, 165
Pressure regulator, 143
  adjustment, 147
  serger, 373
Protein fibers, 50

R

Raglan sleeves, 334
Raw edges, 66
Repeat, 108
Reverse stitch control, 143
Rib, 65
Ribbing, 410, 411
Ribbon-finished hem, 399
Rippled hem, 363
Rolled-hem stitch, 242
Rotary cutter, 131

S

Satin weave, 51
Scalloping shears, 131
Scissors, 131
Seam finishes, 195-200
  bound, 196
  serge-stitched, 196
  stitched-and-pinked, 195
  turned-and-stitched, 196
  zigzagged, 196
Seam gauge, 130
Seam ripper, 136
Seam roll, 165
Seams,
  adding stretch, 287
  curved, 182
  decorative lapped, 289, 290
  directional stitching, 288
  double-stitched, 184
  flat-felled, 183
  flatlocked, 396
  French, 184, 396
  hand basting, 180
  matching plaids, 288
  mock flat-felled, 396
  mock French, 396
  narrow double-stitched, 395
  pin basting, 179, 180, 287
  plain, 181
  serged, 395
  serged/topstitched, 182, 395
  slot, 183
  stabilizing, 288
  stitching guidelines, 180
  stitching with grain, 181
  topstitched, 182

  turning corners, 182
  twin-needle, 184
  welt, 182
- Seam sealant, 381
- Selvage, 64
- Serged/topstitch seam, 395
- Serged (zigzagged) hem, 247
- Serge (pine) stitch, 148
- Serger, 371
- Serger construction techniques, 391-405
  - basting, 394
  - belt loops, 409
  - center-gathered ruffles, 409
  - collars, 410
  - construction order, 393
  - continuous stitching, 407
  - cuffs, 411
  - darts, 407
  - elastic, 412
  - elastic casings, 413
  - fabric selection, 392
  - finishing seam allowances and edges, 395
  - gathering, 397
  - hems, 398-400
  - lace attachment, 414
  - pattern adjustments, 393
  - pattern selection, 391
  - pattern symbols, 394
  - pockets, 408
  - pressing, 394
  - ribbing, 410, 411
  - seams, 395, 396
  - sleeve openings, 411
  - staystitching, 394
  - ties and straps, 408, 409
  - tucks, 408
  - waistbands, 412
- Serger operation, 371-390
  - changing knives, 373, 374
  - changing needles, 374
  - difference from conventional machines, 372
  - differential feed regulator adjustment, 380
  - easy-threading method, 376
  - machine care, 383
  - machine parts, 372, 373
  - machine problems, 384
  - machine stitching, 378
  - pressure regulator adjustment, 380
  - removing stitches from stitch finger, 376
  - ripping out stitching, 383
  - securing seam ends, 380, 381
  - serging curves, 381
  - serging in a circle, 382, 383
  - stitching guidelines, 379
  - stitch length adjustment, 379
  - stitch width adjustment, 380
  - tension adjustment, 379
  - threading, 375
  - thread selection, 374
  - turning inside corners, 382
  - turning outside corners, 382
  - types of stitches, 376, 377
- Serge-stitched finish, 196
- Set-in sleeves, 334, 335
- Sewing machine, 141-162
  - backstitching, 145
  - buttonholes, 148
  - care, 151
  - changing needle, 144
  - inserting bobbin, 144
  - needles, 133
  - parts, 141-143
  - pressure regulator adjustment, 147
  - problems, 144-152
    - pulling up bobbin thread, 144
    - stitches, 148, 149
    - stitching, 145
    - stitching guidelines, 147
    - stitch length adjustment, 146
    - tension adjustment, 146
    - threading, 144
    - turning corners, 147
- Sharps, 135
- Shears, 131
- Shoulder pads, 345-347
- Single-layer construction, 392
- Size, 38
- Sleeve board, 165
- Sleeve openings, 337-340
  - continuous lap placket construction, 338, 339
  - serged, 411
  - types, 337
- Sleeves, 333-336
  - kimono, 334
  - openings, 337-340
  - open-sleeve method, 335
  - raglan, 324
  - set-in, 334, 335
  - types, 333
- Slip stitch, 241
- Slot seam, 183
- Snaps, 367
- Spool cap, 375
- Spool pin, 143
  - serger, 373
- Stabilizers, 133-135
- Stabilizing, 397
- Stable knit, 38
- Stays, 303
- Staystitching, 173-178
- Stitched-and-pinked finish, 195
- Stitched-and-pinked hem, 239

Stitch finger, 373
Stitching guidelines, 143, 147, 180
  serger, 379
Stitching, machine, 145
Stitch length, 146
Stitch length control, 143
Stitch length regulator, 373
Stitch selector, 143
Stitch types, 148, 149
Stitch width control, 143
Stitch width regulator, 373
Straight stitch, 148
Stretch interfacing, 225
Stretch knit, 39
Stretch knit zipper insertion, 310, 311
Stretch (multistitch) zigzag stitch, 149
Stretch stitch, 149
Striped fabrics, 107, 108

T

Tailor's chalk, 120, 121, 132
Tailor's ham, 165
Tailor's tacks, 122
Take-up lever, 143
Taped hem, 246, 247
Tape measure, 130
Tension, 146
Tension dial and regulator, 142
  serger, 379
Thimble, 136
Thread guides, 144
  serger, 373
3-thread overlock stitch, 377
3/4-thread overlock stitch, 377
Throat plate, 143
  serger, 373
Ties, 299-302
  corded tubing, 300, 301
  narrow, 299
  serged, 408
  wide, 300
Topstitched seam, 182
Topstitching, 231-238
  directional stitching, 233
  edge stitching, 233
  guides, 133, 232, 233
  lapels, 330
  pockets, 294
  stitching choices, 232
  thread selection, 231
Tracing paper and wheel, 119, 120, 132
Trade name, 50
Trimming, 190
Trims, 432
Tucks, 284
  serged, 408
Turned-and-stitched finish, 196
Turned-and-stitched hem, 241
Twill tape, 130
Twill weave, 51
Twin-needle hem, 249
Twin-needle seam, 184
Twin-needle stitch, 149
2-thread chain stitch, 377
2-thread overedge stitch, 377

U

Understitching, 207-211
  facings, 319
Uneven plaid, 108

W

Waistbands, 349-352
  attaching, 350, 351
  interfacing, 350
  preparation, 349
  serged, 412
  types of interfacing, 349
Waistline seams, 303
Warp yarn, 64
Weft, 64
Weft-insertion interfacing, 223, 224
Welt seam, 182
Woven fabrics, 51
Woven interfacing, 223, 224

Y

Yardage requirements, 39, 40
Yardstick, 131
Yarn, 49
Yokes, 321, 322

Z

Zigzagged finish, 196
Zigzag stitch, 148
Zippers, 305-312
  bias-cut edges, 305
  centered, 306, 307
  even topstitching, 306
  fly front, 309, 310
  invisible, 311
  lapped, 307-309
  preparing the seam, 305
  stretch knit, 310, 311

ISBN 1-56637-860-5
90000
9 781566 378604